Moving tech support offshore remains a sensitive issue for some IT execs. But it's still on the rise. PAGE 7

OPINION: Apple's Tiger operating system is the future of personal computing, Michael Gartenberg says. PAGE 16

COMPUTERWORLD

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PATRICIA BARRY LEVY

Microsoft Details Plan to Put Virtualization in OS

Road map includes 'hypervisor' code for Longhorn; architecture parallels VMware's

BY CAROL SLIWA
SEATTLE

Microsoft Corp. last week fleshed out the details of a plan to build virtualization capabilities directly into Windows as part of its effort to catch up to virtualization software market leader VMware Inc.

Microsoft plans to adopt an architecture similar to the one VMware uses — a point that VMware seized upon as a validation of its technical direction. But Microsoft said vendors won't be able to differentiate themselves on virtualization alone once the technology is supported in operating systems and chips.

ONLINE
IT execs say they plan to take their time on 64-bit Windows:
QuickLink 54116

The virtualization road map that Microsoft laid out at its Windows Hardware Engineering Conference here includes a lightweight "hypervisor" layer of code that will be built into the next major version of Windows, code-named Longhorn, to support the creation of virtual machines.

Microsoft is even "leaning" toward eliminating future versions of its Virtual Server and

Microsoft, page 14

Users Rip Veritas on License Tracking; CEO Vows Action

BY LUCAS MEARIAN
SAN FRANCISCO

Users of Veritas Software Corp.'s storage management tools complained last week that the company has done little to improve its confusing and hard-to-track software licensing models.

Many IT managers at the annual Veritas user conference here also expressed concerns that its licenses could become even more difficult to manage after Symantec Corp.'s planned purchase of Veritas. In addition, some users said they fear that the acquisition will hurt Veritas' customer service operation.

"The biggest problem we're running into right now is license reconciliation and tracking and renewal," Steve Frewin, a storage administrator at Portland, Maine-based Banknorth Group Inc., told Veritas CEO Gary Bloom during a question-and-answer session following Bloom's keynote address at the Veritas Vision conference.

Douglas Britz, a storage administrator at farm equipment manufacturer Deere & Co. in Moline, Ill., agreed, saying Veritas needs to do more to improve the tracking of its software licenses. Deere is often forced to recheck data after receiving bills from

Veritas, page 45

MORE INSIDE
Q&A: Veritas CEO Gary Bloom on Symantec's acquisition, licensing issues and product plans. Page 45

PMOs Viewed As Unneeded Bureaucracy

BY THOMAS HOFFMAN
ATLANTA

As project management offices work to instill more-disciplined approaches to managing IT projects, their leaders are often finding it tough to avoid the perception that they're creating excessive bureaucracy.

"We all know there's resistance to a PMO" by project managers, said Tom Nodar, PMO manager for the American Cancer Society. "There's this image of a governing body being bureaucratic or creating red tape" to manage and mon-

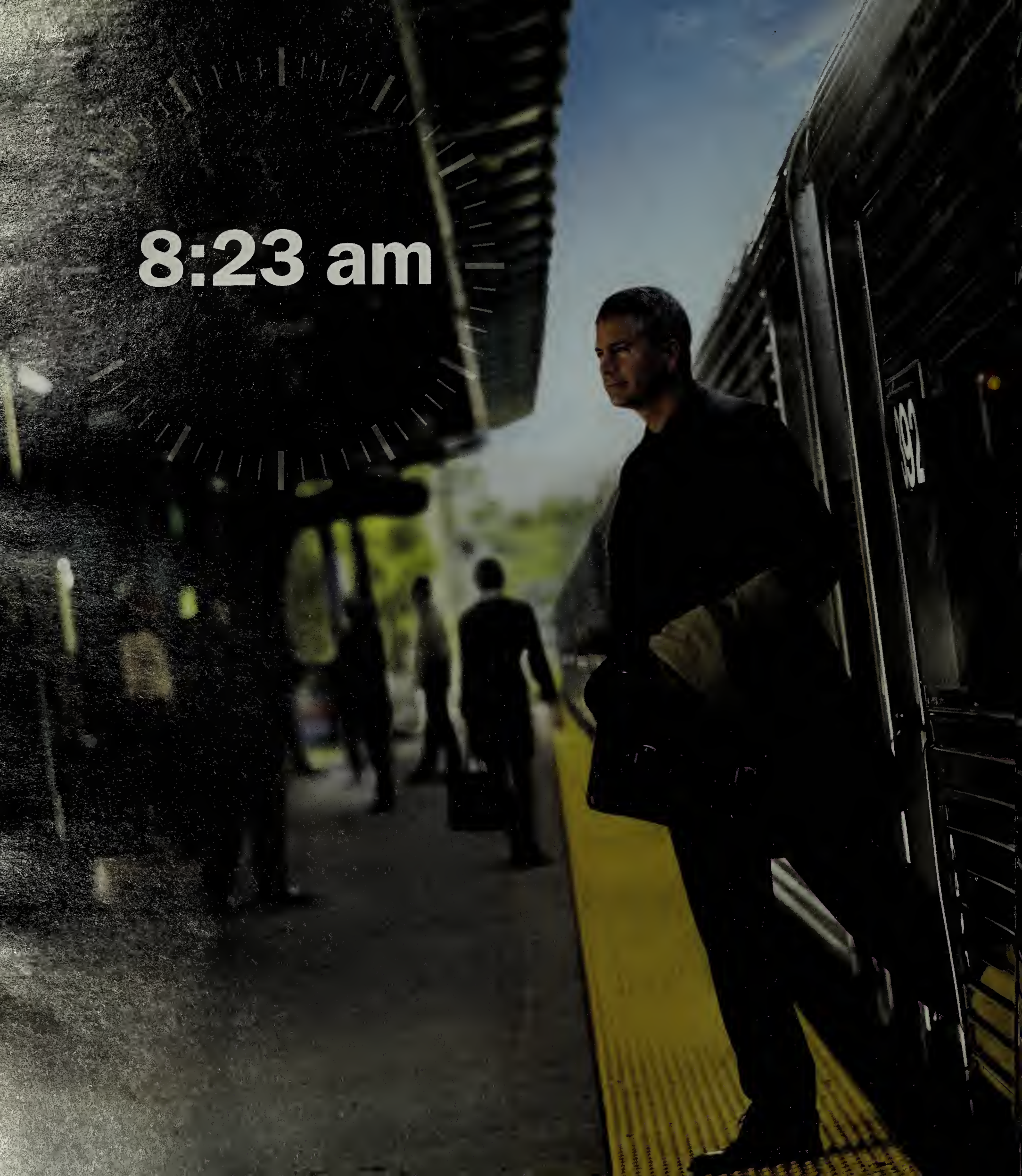
PMOs, page 14

100 PREMIER [SPOTLIGHT]

How do you get your top six IT vendors to squelch their competitive instincts and work together? Ask Xcel Energy's Ray Gogel.
BY THOMAS HOFFMAN. PAGE 33

Power Partners

NEWSPAPER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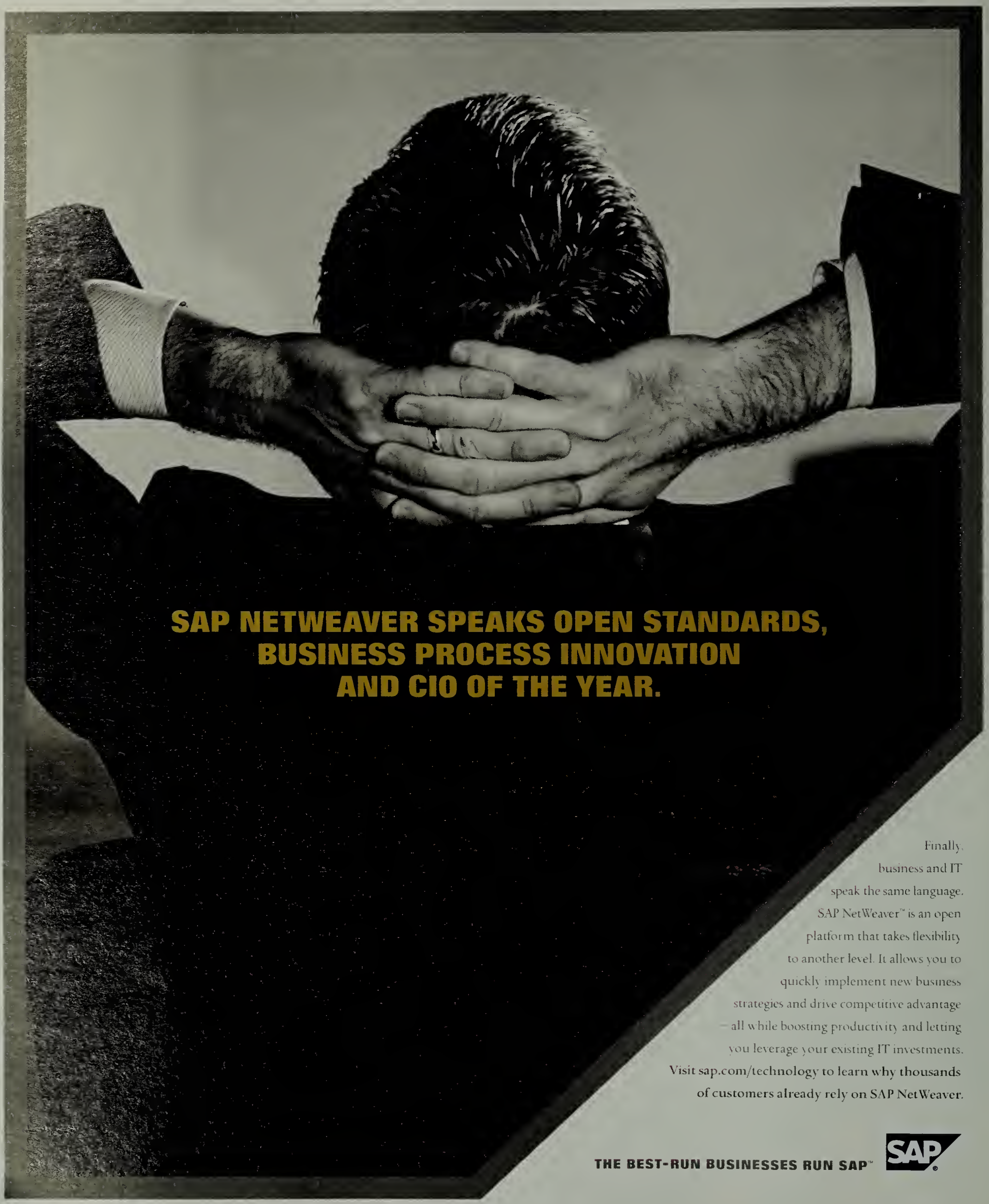

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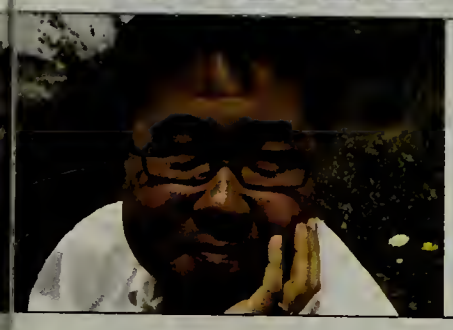

Incremental Improvement

In this week's Technology section: Synthetic backup, which is based on storing only incremental data changes, is being used by an increasing number of IT managers, such as Bernard Shen of BAE Systems North America, because the technique cuts backup and recovery times. **Page 21**

Customer-centric IT: A Road Map

In the Management section: Every IT group says it's all about the customer, but CIO Bill Kwelty says Automotive Resources International really has built an IT team that puts the customer first. **Page 38**

NEWS

6 Cisco plans to announce 11 branch-office routers at the Interop conference. And Siemens, Avaya and Nortel are also expected to unveil new products.

7 Moving tech support offshore is still a sensitive topic for some IT managers.

7 British American Tobacco is moving developers at 180 sites to a set of service-oriented architecture tools.

10 Juniper Networks is rolling out tools for controlling network access and usage, and it plans to build a security architecture to compete with Cisco and Microsoft.

10 IBM wins a $402 million contract to consolidate the University of Pittsburgh Medical Center's IT infrastructure.

12 A difficult SAP deployment hurts a furniture maker, which has had problems training staffers to use the software.

12 SAP unveils technology to link MySAP and Microsoft Office software.

13 Global Dispatches: Gartner says the IT services market in Western Europe is ready to grow again; and South Africa's tax agency is moving its SAP applications to Linux servers.

13 Siebel acknowledges that it was "embarrassed" by its first-quarter results, which included a 41% drop in software license revenue.

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30 QuickStudy: Python. This object-oriented, open-source programming language is often used for rapid application development. Python's simple syntax emphasizes readability, reducing the cost of program maintenance.

31 Security Manager's Journal: The Cost of Securing the People's Privacy. A proposed legislative bill on consumer privacy has C.J. Kelly crunching the numbers for a fiscal impact analysis.

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33 Power Partners. How do you get your top six IT vendors to ignore their competitive instincts and work together for the good of your company? Ask Xcel Energy.

36 Think Tank. Analysts say it isn't easy to switch from a cost-cutting mind-set to more innovative IT work. Meanwhile, a new book says routine programming work is out and inventiveness is in.

40 Career Watch. Unhappy CIOs seek greener pastures; IBM deploys just-in-time employees; workers weigh their benefits; and outsourcing continues to rise.

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16 Michael Gartenberg is impressed by the productivity boost provided by the new search tool in Apple's Tiger operating system.

17 Michael H. Hugos boils down the development of information systems to just six core techniques.

32 Mark Willoughby looks to the future, beyond Moore's Law to Ray Kurzweil's Law of Accelerating Returns, the Singularity and the Gray Goo.

41 Paul Glen says that motivating your team members can be difficult, but demotivating them is a snap. He has advice on what not to do.

46 Frankly Speaking: Frank Hayes reconsiders patent law reform after hearing from an independent inventor who says many of the proposed changes would benefit big vendors.

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Don't Play 'Schedule Chicken'

DEVELOPMENT: Columnist Johanna Rothman explains how to avoid scheduling games and accurately gauge the reality of a project's progress. **QuickLink 54059**

Planning Is Possible

SECURITY: Microsoft makes it easier for IT managers to plan for needed updates by offering its Security Bulletin Advance Notification system free of charge, says columnist Douglas Schweitzer. **QuickLink 53757**

Rescuing Remote Data

DISASTER RECOVERY: Jim Reinert of Ontrack Data Recovery discusses the advantages and challenges of restoring lost data remotely. **QuickLink 53879**

Trust: Hard to Earn, Easy to Lose

E-BUSINESS: A majority of online consumers trust e-banking more than their local branch banks, according to a Ponemon Institute survey. However, a single privacy breach would prompt many to take their business elsewhere. **QuickLink a5820**

The Weakest Link?

SECURITY WEBCAST: You may think that terrorism is the domain of government agencies, but security author Dan Verton warns corporate IT managers to be aware of their roles in protecting the national cyberinfrastructure. Register for this free on-demand webcast at **QuickLink a5810**

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QuickLink a2570

The Online Store
QuickLink a2420

AT DEADLINE

Microsoft Profits Double in Q3

Microsoft Corp. reported that profits almost doubled in its third quarter on a 5% increase in sales. The company's revenue fell short of Wall Street expectations.

MICROSOFT BY THE NUMBERS		
	REVENUE	PROFIT
Q3 '05	$9.62B	$2.56B
Q3 '04	$9.18B	$1.32B

Sun Scales Back N1 Grid Software

Sun Microsystems Inc. this week will announce new N1 Grid software for managing and provisioning groups of servers in a data center. The product focuses on managing only Sun hardware, reflecting Sun's recent move to scale back the original N1 plan that promised multivendor support. The N1 software lets users manage data center equipment as if it were a single, large system.

China's Top Bank Turns to Linux

China's biggest bank – Industrial and Commercial Bank of China – has signed an agreement to deploy Linux-based Turbolinux 7 DataServers across its network of 20,000 branches. The bank is in the process of choosing an integrator to oversee the project. Terms of the contract with Turbolinux Inc. weren't disclosed.

Juniper Purchases Peribit, Redline

Juniper Networks Inc. last week agreed to acquire Peribit Networks Inc., a developer of WAN optimization technology, and application front-end vendor Redline Networks Inc. The Peribit acquisition is valued at $337 million, and the Redline purchase is valued at $132 million. Both are cash and stock transactions. Jupiter will use the acquired technology to augment its routing and security infrastructure offerings. (See related Juniper news, page 10.)

Cisco Adds 11 Routers For Branch-Office Apps

Says new models support wire-speed performance, offer VPN security tools

BY MATT HAMBLEN

AT THE INTEROP conference in Las Vegas today, Cisco Systems Inc. will expand its line of wireless-enabled routers that provide advanced security functions and support data, voice and video traffic.

The announcement by Cisco is one of several rollouts planned by major networking equipment vendors as part of the event, which is now in its 20th year.

Cisco is adding 11 models to its roster of so-called integrated services routers — five in the 1800 Series line that debuted last year with a single model, and six that upgrade its entry-level 800 Series to the integrated services status. The new routers start at $400 to $1,300 and are aimed at small businesses and the branch offices of large companies, said Robert Checketts, senior manager of enterprise routing product marketing at Cisco.

Checketts added that this week's announcement rounds out the integrated services router line, which also includes the higher-end 3800 and 2800 series. Cisco has sold $600 million worth of the routers during the past two quarters, its fastest product sales ramp-up ever, he said.

Quick Installation

Grant Opperman, president and chief strategy officer at D.W. Morgan Co. in Pleasanton, Calif., said the logistics outsourcing company tested a prerelease version of Cisco's Model 1811 router and now wants to try one of the new 800 Series devices to see if it's as easy to deploy.

The 1811 was configured in one day with firewall, data security and voice capabilities, according to Opperman. "What a difference," he said, comparing the quick installation with his previous experiences with routers from Cisco and other vendors. Opperman added that because the integrated services routers provide so much functionality, he calls them "an office in a box."

Dan Campbell, CIO at Watt Commercial Properties Inc. in Santa Monica, Calif., said he wants to order 800 Series routers with integrated Wi-Fi capabilities for up to 40 branch offices. The routers would support workers who have wireless-enabled laptops. Campbell said the purchase would eliminate the need to buy multiple boxes to provide security and routing capabilities at the branch offices.

Zeus Kerravala, an analyst at The Yankee Group in Boston, said the integrated services router line fills a gap for users who want the ability to easily manage branch offices remotely. Cisco's offering brings together more features than many of its competitors have built into their branch-office routers, Kerravala added.

In addition to supporting wire-speed performance, Cisco's devices include built-in virtual private network hardware encryption and acceleration, a VPN firewall and intrusion-prevention functionality. Optional Wi-Fi support costs $100 to $300 per router.

Cisco will also make separate security and wireless announcements at Interop but wouldn't disclose details last week. Other vendors planning rollouts at the show include Siemens Communications Inc., Avaya Inc. and Nortel Networks Ltd. (see story below).

The conference had been called NetWorld+Interop since 1994. But its owner, San Francisco-based MediaLive International Inc., this year decided to revert to Interop, which was the show's original name. **54088**

Cisco's new 800 and 1800 series routers support various types of traffic and include security features such as built-in encryption.

MORE INTEROP NEWS

Juniper Networks aims to compete with Cisco Systems and Microsoft on network security. **Page 10**

Wi-Fi, SIP in Spotlight During Interop Rollouts

AMONG OTHER announcements at Interop, Siemens Communications tomorrow will announce tools for adding Wi-Fi capabilities to data networks or voice-over-IP systems. The new HiPath Wireless system is based on technology developed by Chantry Networks Inc., a Waltham, Mass.-based company that Siemens acquired in January.

Connor Brosnahan, network manager at South Nassau Communities Hospital Inc. in Oceanside, N.Y., bought a Chantry system consisting of two controllers and 120 wireless access points a year ago. The hospital offers Wi-Fi services to visitors on a separate channel from the one used by its employees, who do a variety of jobs on wireless-enabled tablet PCs and will eventually be given voice-over-Wi-Fi capabilities, Brosnahan said.

South Nassau plans to transition to HiPath Wireless in the next two weeks, Brosnahan said, adding that he's hopeful – but cautious – that things will work out well. "I'm a little iffy on working with Siemens, since I work with a lot of medical devices from Siemens and some of my dealings have been very happy and others are very annoying," he said.

Siemens is also unveiling a $495 Wi-Fi phone that's based on the Session Initiation Protocol (SIP) and includes a color display. Craig Mathias, an analyst at Farpoint Group in Ashland, Mass., said the Wi-Fi offerings give Siemens a "much more complete product line."

Avaya is announcing Converged Communications Server 3.0, which provides application programming interfaces for linking its IP telephony software with SIP-based products for real-time collaboration. The company is also rolling out Communication Manager 3.0, an upgrade of its flagship IP telephony technology.

Nortel plans to introduce Business Communications Manager 50, a converged voice and data system that provides unified messaging, IP networking, Internet access, IP telephony and other features for branch offices.

Lloyd Shockley, founder of On Hold Marketing in Richmond, Va., has beta-tested BCM 50 for the past 90 days, using the system to record voice messages for companies that want to market products and services to customers who get put on hold during phone calls. That feature and others have been "a godsend," Shockley said.

– Matt Hamblen

Offshore Tech Support Still Stirs Controversy

Some say communication is a problem, but outsourcing of help desks continues

BY PATRICK THIBODEAU

Dell Inc. last week announced a three-year contract to manage 57,000 desktop and laptop PCs in the U.S. for Honeywell International Inc., expanding a deal under which Dell already manages 16,000 Honeywell PCs in Europe.

About 18 months ago, Dell said it had stopped routing most technical support calls from U.S. corporate users to a facility in India after some customers complained about the quality of the help they received [QuickLink 43172]. The company didn't completely end its use of offshore help desk services for U.S.-based users. But at least in regard to Honeywell, technical support will be delivered from sites in the U.S., according to Dell.

Honeywell deferred questions on the support issue to Dell. Bob Kaufman, a Dell spokesman, said the company's help desk support plan for Honeywell is consistent with its overall goal of providing services based on customer needs and proximity.

A Sensitive Issue

For some IT managers, using offshore operations to provide telephone support remains a thorny issue. For example, when Emmanuel Ramos, CIO at Resun Corp., a modular building maker in Dulles, Va., considered outsourcing his desktop support last year, one of the first questions he asked prospective vendors was whether their help desks were located in North America. Ramos said he didn't want to risk upsetting his users.

Fremont, Calif.-based Everdream Corp., the desktop managed services provider that Ramos picked, had started offshore support operations in Costa Rica. But Everdream CEO Gary Griffiths said he closed the offshore center there a year ago, after deciding that sending technical support offshore could hurt customer relations.

Curtis Helsel, vice president of data and technology management at the University of Colorado Foundation in Boulder, said his experience with offshore customer support on personal IT matters has led him to believe that communication can be difficult. The foundation uses a managed services provider, San Jose-based CenterBeam Inc., that operates a help desk in Saint John, New Brunswick.

Regardless of such views, though, offshore outsourcing of technical support is increasing, according to Marcus Courtney, president of the Seattle-based Washington Alliance of Technology Workers, Communications Workers of America. "What I see is an expansion of companies moving their corporate help desk overseas," Courtney said.

Reports of failures in offshore support services operations are "exceptions," said B. Ramalinga Raju, founder and chairman of Hyderabad, India-based Satyam Computer Services Ltd., which provides help desk support and other IT services. "There are many examples of this being successful."

Dell CEO Kevin Rollins said in India on Friday that the company plans to increase the number of workers at its call centers and software development operations there to 10,000 by year's end. Dell now has between 7,000 and 8,000 employees in India.

Kaufman stressed that all of Dell's support workers are trained to meet the same standards, "no matter where they sit." The location of staffers chosen to support certain customers depends on factors such as time zones, he said, adding that Dell supports U.S. business customers from facilities located in the U.S. as well as in countries such as India and Panama.

Robert Schoening, CIO at Pathmark Stores Inc., which operates 142 supermarkets in the New York, New Jersey and Philadelphia metro areas, said dealing with offshore help desks on personal issues "can get frustrating."

But Schoening, whose Carteret, N.J.-based company last week said it had signed a seven-year agreement to renew an outsourcing deal with IBM, added that he thinks offshore support could work. If IBM "thought it could be done efficiently and effectively, I'm not sure that I would have problems — partly because it's hard to staff help desks," Schoening said. "It's a high burnout rate. . . . People don't like to do that job." 54113

> **"[If IBM] thought it could be done efficiently and effectively, I'm not sure that I would have problems – partly because it's hard to staff help desks. . . . People don't like to do that job.**
>
> **ROBERT SCHOENING**, CIO, PATHMARK STORES, ON MOVING TECHNICAL SUPPORT OFFSHORE

Tobacco Firm Shifts Development to SOA

BY HEATHER HAVENSTEIN

British American Tobacco PLC this week will start moving developers at 180 locations worldwide to a new development platform as the company begins to build most new applications as services.

The London-based supplier of tobacco products plans to move developers using tools from Oracle Corp., Microsoft Corp. and IBM to service-oriented architecture (SOA) tools from Skyway Software for almost all new custom development, said Kevin Poulter, application technology manager at British American.

This week, 15 developers in British American's Kuala Lumpur group services division will begin using Skyway's SOA Builder software.

Developers at other locations will start using the tools throughout the year. Poulter said he expects that applications built using the tools will go into production during the second half of the year.

British American, which has used Web services to integrate applications since 2002, will also use Skyway to migrate existing applications worldwide — including 6,000 built in Lotus Domino and 200 custom applications used at its headquarters — to Web services and services native to Java.

"We wanted to get all those developers brought onto a common platform," Poulter said. "It gives us much better options in consolidating infrastructure for cost savings."

PRODUCT DETAILS

Skyway's SOA Builder Tools

- Use modeling for designing, constructing and assembling components into services.
- Require no coding or knowledge of programming languages.
- Allow developers to connect to databases, native Java services and Web services.
- Support multiple developers with a graphical, network-aware version-control repository.

The company hasn't calculated potential cost savings from the shift to an SOA-based application development model. But Poulter noted that using Web services to integrate applications over the past two years has been 60% to 70% cheaper than traditional hard-coded integration.

The move will also help support British American's architectural vision of running "loosely coupled" composite applications made up of processes that can be easily tied together or uncoupled when business requirements change, Poulter said. For example, the company has built a Web service that provides daily updates to its global procurement system, based on fluctuating exchange rates.

To support the move to an SOA, British American developers must shift from focusing on coding to working on incorporating business requirements into new composite applications, Poulter said.

"You're trying to [bring] people to a higher-level development paradigm so they are closer to the business-analyst-type developer," he said.

Skyway's SOA Platform offerings provide model-driven development techniques that allow developers to build services, processes and applications without having to write code or know programming languages, said Jared Rodriguez, CEO of Tampa-based Skyway.

Daryl Plummer, an analyst at Gartner Inc., said Skyway's tools are an example of a so-called integrated service environment (ISE) designed to allow developers to assemble services for creating new applications without coding.

"With an ISE, you get the pieces — it may be a Web service, a Java component, .Net component, a file or a database," Plummer said. "The work is at a higher level of abstraction, so it is not code work, it is assembly work. You have to be able to figure out which pieces you want and make sure they have the right data and that you can relate them to other pieces." 54110

BRIEFS

Cisco Adding Sipura To Linksys Unit

Cisco Systems Inc. plans to purchase voice-over-IP vendor Sipura Technology Inc. for $68 million in cash and stock. San Jose-based Sipura will be integrated into Cisco's Linksys division. The acquisition is the first that Cisco has made for Linksys since it bought the Irvine, Calif.-based network vendor in 2003.

Sales Boost Doesn't Grow Amazon Profit

Amazon.com Inc. blamed higher taxes for a decline in first-quarter profit but reported that revenue, at $1.9 billion, was up 24% from a year earlier. Chief Financial Officer Tom Szkutak described the results, which beat Wall Street expectations, as "successful."

AMAZON BY THE NUMBERS

	REVENUE	PROFIT
Q1 '05	$1.9B	$78M
Q1 '04	$1.5B	$111M

Nortel Pays $448M For Services Firm

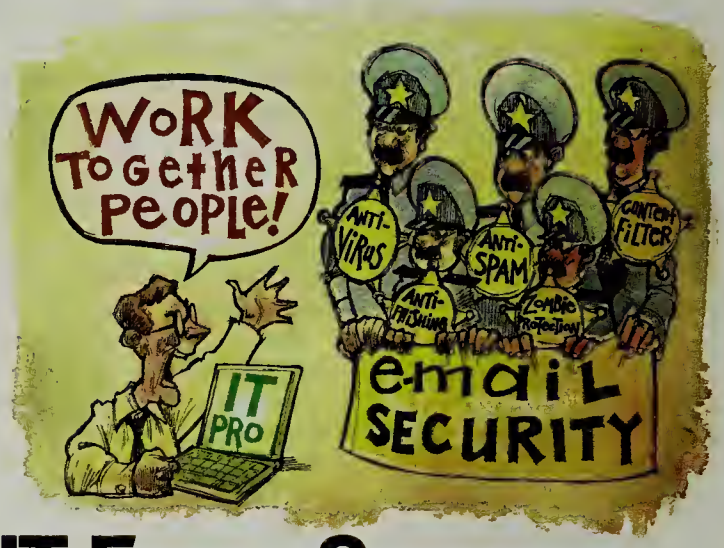
Nortel Networks Inc., the U.S. subsidiary of Canada's Nortel Networks Corp., has agreed to buy Fairfax, Va.-based government IT services provider PEC Solutions Inc. for about $448 million. The acquired firm will become the centerpiece of a new Nortel unit, Nortel PEC Solutions, that will provide IT services for federal, state and local government customers.

Microsoft Names Liddell to CFO Post

Microsoft Corp. has chosen Chris Liddell as its new CFO. He was previously CFO at International Paper Co. and CEO of Carter Holt Harvey Ltd., International Paper's affiliate in New Zealand. Liddell replaces John Connors, who left Microsoft in March after 16 years to become a partner at Seattle-area venture capital firm Ignition Partners LLC.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL



MATTHEW FAULKNER

IT Execs Scurry To Consolidate . . .

. . . tools for securing e-mail – and possibly their spyware defenses, too. Those are the insights that Anne Bonaparte gleaned from a survey of 200 IT executives that was conducted for her company in March by InsightExpress LLC in Stamford, Conn. Bonaparte, CEO of MailFrontier Inc., an e-mail security firm in Palo Alto, Calif., says that the users who were polled didn't know her company was involved and that none were MailFrontier customers. In the survey, 62% of the respondents said they plan to consolidate e-mail security functions, such as antivirus, antispam and content-filtering capabilities, into a single product. And they'll do it fast: 96% of those consolidating said they'll do so in the next 12 months. Why the rush? Bonaparte says it's because of "the rising complexity inside the corporate network's DMZ." She notes that too many point products performing discrete tasks with unique management consoles have resulted in IT staffers at 47% of the surveyed companies spending two or more hours per week fiddling with e-mail security duties. Meanwhile, half of those surveyed said that the time spent on such tasks should be less than a half hour each week. The consolidation trend could also hit antispyware vendors as IT execs look for a consolidated view of all the tools used to protect end-user systems, Bonaparte says.

BONAPARTE: Users want one management interface.

SSL VPN borrows IPsec's tunneling . . .

. . . approach to support end-user access to all applications. Aventail Corp. in Seattle this month will release Version 8.5 of the Smart SSL VPN software for its EX-1500 security appliance. The software's new Smart Tunneling feature lets IT administrators set access policies so end-user machines can tunnel into a corporate network the same way IPsec technology does — at the network layer, which is the third level in the seven-layer protocol stack used in IP networks. According to Sarah Daniels, Aventail's vice president of marketing and product management, traditional virtual private networks based on the Secure Sockets Layer protocol work strictly at the higher layers of the network stack. That gives admins more control over access rights but founders when dealing with streaming media and other applications that work fine over IPsec, she says. Version 8.5 also improves support for Linux and Macintosh clients. Pricing starts at $6,995.

DANIELS: No need for IPsec.

Aventail's EX-1500 security appliance

1M
Number of weak words Password Bouncer filters

Automate management of end users' . . .

. . . accounts with new admin tools. The Avatier Identity Management Server (AIMS) suite, due to become available this week from Avatier Corp. in San Ramon, Calif., includes programs designed to help automate the creation and management of end-user accounts. The software uses data from existing directories to create and terminate accounts. One program, Password Station, automates end-user retrieval of forgotten passwords, taking the burden off of help desk staff. Another tool, Password Bouncer, helps end users create strong passwords. Avatier CEO Nelson Cicchitto says AIMS will also automatically compress and archive the e-mail files, home directories and user profiles of terminated workers to help companies comply with Sarbanes-Oxley Act requirements. The software costs $5 per end user.

Endless indexing is now a breeze . . .

. . . with search app upgrade. Bethesda, Md.-based dtSearch Corp. this week is shipping Version 7 of its eponymous full-text search application for desktops, servers and media such as CD-ROMs. The big thing in dtSearch 7 is, well, bigness, says David Thede, dtSearch's president. Previous versions could handle 4GB to 8GB per index, meaning that multiple indexes were needed for large data sources, which slowed retrieval times. Thede says the new release can handle a whopping 1TB of indexed data. Pricing starts at $199.

VoIP planners need to consider . . .

. . . latency in the design and implementation process. But you knew that, of course, and you also knew about the little matter of voice-over-IP security. Well, according to Bryan Cohen, a senior sales engineer at CDW Corp. in Vernon Hills, Ill., both problems might just disappear if your service provider offers Multiprotocol Label Switching technology. With MPLS, you get a secure circuit for your VoIP packets and a guaranteed maximum packet latency to ensure that calls don't get garbled, Cohen says. He adds that MPLS is ideal for companies using VoIP to connect their far-flung corporate voice networks. In the future, when service providers can bridge MPLS circuits among themselves, calling between companies will also benefit. But that's a few years off.

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Juniper Targets Cisco With Security Strategy

Adds net access tools, details plans for broad offering

BY JAIKUMAR VIJAYAN

LOOKING TO ratchet up its competition with Cisco Systems Inc. in the corporate networking market, Juniper Networks Inc. this week will introduce a set of security tools designed to help IT managers more efficiently enforce access-control and usage policies on their networks.

Juniper, which is expected to make the announcement at the Interop show in Las Vegas, will also outline a broad network security framework that it plans to fill out over the next few years. The Enterprise Infranet initiative is designed to give users a comprehensive, policy-based approach to securing networks, applications and end-user devices, said Rod Murchison, the Sunnyvale, Calif.-based vendor's director of product management.

The framework planned by Juniper gives IT managers a potential alternative to Cisco's emerging Network Admission Control (NAC) technology and the Network Access Protection offering that Microsoft Corp. is developing.

Overall, the move to integrate security functions into the network layer is a good thing, said Hugh McArthur, director of information systems security at Online Resources Corp., a Chantilly, Va.-based online bill-processing firm.

But companies that have already invested in firewalls, intrusion-detection systems and network monitoring tools have little reason to dump their current technologies for the integrated functions, McArthur said. "I also feel that there are still advantages to using diverse products for providing multiple layers of protection that aren't vendor-dependent," he added.

The security functions being delivered at the network layer also need to mature more before many users will feel confident enough to enable the automated responses to network threats and attacks that the technologies support, said Eric Beasley, senior network manager at Baker Hill Corp. in Carmel, Ind.

"Right now, it wouldn't be something that I would let loose on my networks," he said.

David Flynn, vice president of products for Juniper's security tools and network-access routers, acknowledged that completely delivering on the Enterprise Infranet vision will be a multiyear process. In addition, many users will have to more tightly integrate their IT security operations in order to fully embrace Juniper's planned offerings, he said.

"It does change the way they need to think about how they operate," Flynn noted.

Juniper's new tools for controlling network access and usage are based on technology from its acquisition of NetScreen Technologies Inc. last year and are due for release in the third quarter. They're similar to the initial NAC products that Cisco released last year. But the tools also provide continuous monitoring of devices, instead of simply deciding whether they should be able to access a network, Flynn said.

Another key difference is that Cisco is integrating the security into its networking equipment, while Juniper is offering its tools as an "overlay solution" designed to work with a mix of network gear, said Robert Whiteley, an analyst at Forrester Research Inc.

Jim Slaby, an analyst at The Yankee Group in Boston, agreed. "Cisco's approach really anticipates that you have an all-Cisco network and that you have updated your network infrastructure to versions of the Cisco operating system that support NAC," he said. "For a lot of customers, that's going to take quite a while and be rather expensive." **54103**

Craig Stedman contributed to this story.

Network Minders

Juniper's Enterprise Infranet Service Control Layer includes:

- A policy server and controller that can be installed centrally or distributed in a network.
- Upgraded firewall software that supports SSL VPN technology and enforces network access and usage policies.
- An agent that verifies the security status of PCs.

IBM to Consolidate Med Center Systems

BY HEATHER HAVENSTEIN

The University of Pittsburgh Medical Center (UPMC) has tapped IBM for a $402 million project to consolidate its IT infrastructure. The project aims to reduce operating costs and support new applications like electronic health records.

The eight-year deal, announced last week, also calls for jointly spending up to $200 million on research and development of health care technology, such as software for detecting nationwide epidemics or bioterrorist attacks.

Paul Sikora, director of production services at the medical center, said the organization will standardize on IBM systems running z/OS, AIX and Linux. The IBM systems will replace technology from Hewlett-Packard Co., Sun Microsystems Inc., Hitachi Ltd., EMC Corp. and others.

"We can't continue to build out our infrastructure in that form because it takes too much support, too much expertise to make it practical," he said. Standardizing on a single vendor's technology will "enable us to manage according to service levels rather than technology silos."

The consolidation will allow the medical center to reduce its IT operating costs by 15% to 20% within three years, Sikora said. The project will reduce UPMC's operating systems from nine to three, its servers from 786 to 305 and its storage arrays from 40 to two.

The consolidated infrastructure will allow UPMC to more easily expand use of its electronic medical records system, which it has been developing for four years, said Nancy Landman, UPMC's director of business development and operations.

The complex records system should benefit significantly from the IBM-centric operation, she said. "When you are looking at patient information ... there are multiple sources of information that feed into that. The integration needs in the electronic health records environment are just huge."

The cost savings from the consolidation will help fund additional strategic initiatives, like an electronic order-entry system for physicians, she added. Current systems allow for "no second-guessing" of physician orders for medication, she said. "Now, with the data we are collecting and the analytical tools that are available ... we can say the lab values show this medication might not be the best medication," Landman said.

The deal represents IBM's largest health care win for its on-demand IT initiative, said Neil de Crescenzo, IBM's health care industry leader.

Scott Tiazkun, an analyst at IDC, said other large health care organizations might be interested in similar arrangements. Potential benefits include reduced costs and improved patient care because organizations can more easily support applications like electronic health records.

IBM and UPMC have so far agreed to jointly invest a minimum of $50 million in R&D efforts. A long-term joint investment of $200 million is possible over the life of the contract. The partnership will create a testbed for technology to monitor nationwide disease outbreaks and to apply lean manufacturing and quality improvement processes from manufacturing organizations to hospital operations, de Crescenzo said. **54100**

UPMC expects to lower operating costs while improving patient care.

MORE NEWS ONLINE

IBM is developing a pilot system for electronically sharing health data:

QuickLink 54053
www.computerworld.com

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BRIEFS

Secunia Warns of Netscape Flaw

A "highly critical" unpatched vulnerability in Netscape Communications Corp.'s browser could allow hackers to compromise Internet users' systems, according to an advisory from Denmark-based security firm Secunia. The buffer overflow vulnerability could cause the browser to crash. The flaw has been confirmed in Version 7.2 and reported in Version 6.2.3. Secunia advised users to switch browsers until the flaw is fixed.

IBM Plans to Unveil ThinkPad Tablet

IBM has developed a ThinkPad laptop with a rotating screen that can be used as a tablet computer, according to documents filed with the Federal Communications Commission. FCC approval is required for the sale of any device that supports wireless LAN connectivity. The appearance of these documents on the FCC Web site is a general indication that the IBM X41 tablet series is close to commercial availability.

Verizon Profits Up More Than 40%

New York-based Verizon Communications Inc. reported improved first-quarter earnings, citing sharp increases in wireless customers and broadband connections.

VERIZON BY THE NUMBERS

	REVENUE	PROFIT
Q1 '05	$18.2B	$1.8B
Q1 '04	$17.1B	$1.2B

Equity Firms Pay $1.1B for DoubleClick

Two private equity firms have bought online advertising company DoubleClick Inc. for $1.1 billion. Buyers Hellman and Friedman LLC and JMI Equity Fund LP expect to complete the deal in the third quarter. New York-based DoubleClick hired Lazard Freres & Co. last year to evaluate future options for the business.

Difficult ERP Rollout Slows Furniture Maker

Rowe blames backlog, losses on SAP implementation and training problems

BY MARC L. SONGINI

PROBLEMS DURING an SAP AG software installation have hit Rowe Furniture Inc.'s bottom line as the company scrambles to fill a backlog of customer orders that arose during the rollout of the new technology.

Just over a month ago, the custom furniture maker's parent company, The Rowe Cos., announced that production levels and shipments had been "adversely affected" by changes in manufacturing processes made in connection with the rollout of SAP R/3 ERP software. Unable to keep up with customer demand, Rowe announced its biggest backlog ever and a $149,000 loss for the first quarter, which ended March 3. In comparison, it made a $72,000 profit in the same quarter a year earlier. Rowe Cos. sales totaled $295 million in 2004.

Rowe officials said that there were few technical problems with the software, but implementation and training issues among its workers caused furniture manufacturing and shipping problems.

The SAP implementation was aimed at making the McLean, Va.-based company more competitive with cheaper overseas rivals, in part by cutting furniture delivery times to retailers from 45 days to 10 days by early 2006.

In 2004, Rowe installed SAP human resources, payroll and production scheduling software. Rowe is moving forward with the implementation and may even add supply chain management and CRM modules, as well as a customer portal, officials said.

In a webcast held on March 31, Rowe Cos. Chairman and President Gerald Birnbach said that swapping in the new technology and processes had "proven to be much more difficult than planned." The result was a drop-off in deliveries and a backlog of orders that, as of March, was up 115% over a year ago, he said.

> "We have to be better, because we've got people who want our goods something terrible."
>
> GERALD BIRNBACH, CHAIRMAN AND PRESIDENT, ROWE COS.

"We have to be better, because we've got people who want our goods something terrible," Birnbach said.

The SAP software replaced a number of third-party and homegrown systems that had reached their end of life, said Chief Financial Officer Gene Morphis, who spoke during the webcast and in an interview last week. The SAP software generally worked as planned, he said, albeit with a "couple of interesting, curious little technical problems" that weren't "hugely disruptive."

Once IBM, the integrator on the project, and SAP sent in consultants, "the problems that we could blame on software [began] diminishing pretty dramatically," he said.

Learning Curve

Company employees are "now making sure we are effectively using the software," Morphis said. "We learned during the quarter [that] we had a couple programs we just weren't using correctly. Now that we've figured those things out, we think that by the end of this quarter, we should be making pretty good headway."

Morphis said the most persistent problem has been the inability to supply furniture frames, which are manufactured internally, to the appropriate assembly units in a timely fashion. The delays arose from a change in the way the 5,500 wooden pieces that are assembled into the frames are stored and handled.

It was also difficult to get accurate data to predict demand, in part because SAP requires real-time information feeds on inventory usage whereas Rowe's staff was accustomed to doing batch downloads at the end of each day, Morphis said.

He declined to divulge the overall cost of the system or how much the resulting problems will cost to fix. But he said the latter probably wouldn't be "significant."

As part of the company's effort to fix the problems, Rowe employees are getting additional SAP training.

"We are, we believe, almost out of the woods," said Morphis, adding that the backlog of orders should be fulfilled over the next two quarters. Even with the recent problems, the new ERP system should help the company find further savings, he said.

William Wohl, a spokesman for SAP America Inc., said SAP knows from experience that any company that goes through such an enormous business transformation faces short-term challenges. Nevertheless, he said, such companies ultimately achieve "those objectives to transform the business, and Rowe has indicated to us they see the light at the end of the tunnel."

54109

MySAP/Office Link Shown at Sapphire

SAP last week announced a new technology jointly built with Microsoft Corp. that can integrate its enterprise applications with Microsoft's desktop software.

SAP also unveiled several other products at its Sapphire Europe user event in Copenhagen, including one that links the mySAP ERP application with its Business One small-to-midsize business offering.

SAP and Microsoft said their jointly developed product, code-named Mendocino, will ship by year's end. The integration technology, which will link mySAP and Office 2003, will be sold by both companies. Bruce Richardson, an analyst at Boston-based AMR Research Inc., expects that users will be "delighted" with the integration, though this release is "somewhat limited."

SAP plans to integrate the Business One software with mySAP by using its own NetWeaver technology. SAP spokesman William Wohl said users will be able to tie the mySAP suite directly into Business One without reformatting the data or requiring manual intervention to complete a given workflow. The mySAP/Business One integration technology will ship by the end of this year.

SAP also announced about 100 so-called composite analytical applications, which can import data from SAP and third-party applications for use in business intelligence operations. These SAP Analytics tools will run on the NetWeaver stack by year's end, the company said. The tools are geared toward tax, retail and other fields.

The company also announced that it's adding Flex presentation server technology from Macromedia Inc. to NetWeaver to help developers craft rich graphical user interfaces for the SAP suite.

– Marc L. Songini

GLOBAL DISPATCHES An International IT News Digest

IT Services Heat Up In Western Europe

LONDON

THE IT SERVICES MARKET is making a modest comeback in Western Europe, according to survey results Gartner Inc. released last week at its Outsourcing and IT Services Summit here.

After several years of market stasis, overall IT services revenue in the region is set to grow 3.5% this year to 163 billion euros ($213 billion U.S.), Gartner predicted. The consulting firm, which surveyed 500 IT services firms worldwide early this year, said it expects the market in Western Europe to grow at a compound annual rate of 3.9% from 2004 to 2008, ultimately reaching 185 billion euros ($240 billion). "We've finally turned a corner," said Gartner analyst Nicole France.

Outsourcing will outperform the overall IT services market in 2005, growing by 4.6%, Gartner forecast. Business process outsourcing, which has "held up the market" in recent years, will lead the new growth, France said.

Gartner also predicted a small resurgence in IT services work related to individual projects. France said she expects users to be most willing to invest in security, regulatory compliance and business intelligence projects.

■ SCARLET PRUITT, IDG NEWS SERVICE

GLOBAL FACT

97.8%

The percentage of Scottish properties that are expected to have access to broadband services by the end of this summer.

SOURCE: BT GROUP PLC

South African Agency Migrates to Linux

JOHANNESBURG

THE SOUTH AFRICAN Revenue Service (SARS) has opted to migrate its mainframe-based SAP system to Linux-based servers under a contract awarded to Novell Inc. last month.

SARS CIO Ken Jarvis said the tax agency will run SAP's ERP applications on Dell hardware equipped with Novell's SUSE Linux software. The agency is still evaluating proposals for support of the Linux systems.

Jarvis noted that after talking to vendors about open-source options "and experimenting internally," SARS decided late last year to use Linux-based servers. SUSE Linux is already running in the agency's development operation, and SAP is involved in the conversion effort, Jarvis said.

"The intention here is to remove some of our resource-intensive mainframe applications onto a server platform, where the cost of ownership is significantly reduced," he said. "The next step will be to move PeopleSoft off the mainframe."

■ SAMANTHA PERRY, COMPUTING SOUTH AFRICA

Trend Micro Plans to Reimburse Virus Victims

TOKYO

TREND MICRO INC. last week said it will compensate 3.5 million home users and its corporate customers in Japan for the cost of repairing PCs after it delivered a faulty antivirus software update. Whether the company will offer compensation to users in other countries was left unclear.

Tokyo-based Trend Micro acknowledged that it had not checked some code in the update or fully tested the new software on PCs running Windows XP Service Pack 2 prior to the update's release on April 23. By midweek, the company had fielded over 370,000 calls from customers, including more than 650 corporate users. Dealing with the problem had cost Trend Micro about 300 million yen ($2.8 million) as of last Monday.

The flaw, which uses up processing power and severely degrades performance, affects PCs running SP2 with Trend Micro's OfficeScan or VirusBuster software. **54055**

■ PAUL KALLENDER, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

Microsoft Corp. has agreed to collaborate with INRIA, the French National Institute for Research in Computer Science and Control, to set up a joint research center by 2006. Microsoft CEO Steve Ballmer and French Minister of Research François d'Aubert last week set out a framework for the venture.

■ PETER SAYER, IDG NEWS SERVICE

TAM Brazilian Airlines has awarded Unisys Corp. a five-year contract to provide IT infrastructure outsourcing services. Unisys said it will support more than 7,000 TAM workers in 300 locations worldwide. TAM CIO Maricelio Lauand said airline officials expect the deal to help improve operational efficiency. The contract's value wasn't disclosed.

Sony Corp. blamed price competition in several of its key business areas for another loss during its fourth quarter, which ended March 31. Sony reported a net loss of 56.5 billion yen ($533 million) compared with a loss of 38.2 billion yen ($360 million) in the same period a year earlier. Sales were down 4.2% year over year to 1.7 trillion yen ($16 billion).

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Siebel Reports Sharp Sales Drop; Execs 'Embarrassed'

New CEO stays quiet about plans

BY STACY COWLEY

Two weeks after deposing J. Michael Lawrie as its CEO, Siebel Systems Inc. reported first-quarter results in line with the reduced business levels that the CRM vendor warned about just days before Lawrie's departure.

Siebel's software license revenue for the quarter was $75 million, down 41% from the year-earlier level of $126.8 million. Total revenue was off 9% year over year to $298.9 million. Before Siebel issued its warning, the consensus estimate of financial analysts polled by Thomson First Call was for revenue of $337.5 million.

Ken Goldman, Siebel's chief financial officer, said during a conference call last week that top management at the San Mateo, Calif.-based company was "embarrassed" by the first-quarter performance.

As he did after being named to replace Lawrie [QuickLink 53797], CEO George Shaheen offered few specifics about his plans, though he did say that he wants to overhaul Siebel's sales procedures. Sales cycles are becoming longer and more complex, partly because users are enacting more-rigorous approval processes and increasingly holding out until the final days of quarters to complete deals, Shaheen said.

But he added that internal problems at Siebel are also playing a role. "We have a sales organization today that I think is somewhat complex and overly bureaucratic in how it communicates to customers and to ourselves," Shaheen said. "We could do a much better job as we do our account planning."

Goldman said Siebel will trim expenses across the board. Staff cuts may also be involved, analysts predicted. Siebel has shed more than 3,000 workers in recent years, but its head count grew by about 440 employees to a total of 5,260 over the past 12 months because of acquisitions.

Siebel is due to meet with financial analysts this Thursday; further details on Shaheen's turnaround plans are anticipated at the event.

During last week's conference call, Morgan Stanley analyst Ross MacMillan said Siebel rival SAP AG appears to have compensated for the changing enterprise applications sales process by moving to a higher volume of smaller deals. Shaheen responded that Siebel executives will examine how they can better align the company's sales force with customers' buying cycles.

Excluding a charge related to its January acquisition of Edocs Inc., Siebel's first-quarter net income was $3.2 million. With the charge taken into account, the company posted a $4 million loss, compared with year-earlier income of $31 million. **54111**

Cowley writes for the IDG News Service.

Correction

Last week's Page One story about the new data-protection requirements being imposed on companies that handle credit card information ("Merchants Face Deadline for Data Safety") misstated the date on which the mandates will take effect. Retailers, online merchants and other companies need to comply with the Payment Card Industry Data Security Standard, known as PCI, by June 30.

Continued from page 1

Microsoft

Virtual PC products, said Mark Kieffer, group program manager of Windows virtualization. But Kieffer added that a decision hasn't been finalized.

More immediately, Microsoft plans to work with unidentified industry partners to expand the support of third-party guest operating systems, including versions of Linux, in the first service pack update for Virtual Server 2005. The update is due by year's end and will also include 64-bit compatibility and improved performance, Microsoft said.

The plans weren't enough to sway Jason Agee, a lead infrastructure systems analyst at the Nebraska Health and Human Services System, from his commitment to VMware.

"Too little, too late," Agee said, adding that VMware's more mature virtualization software performs better on less-powerful hardware and is helping the agency to improve its server utilization rates.

But Tom Bittman, an analyst at Gartner Inc., said that the integration of virtualization technology with operating systems should spur broader adoption. Novell Inc. and Red Hat Inc. also plan to support virtualization technology in their Linux distributions.

Microsoft bought its way into the virtualization market two years ago through its acquisition of Connectix Corp., and it released Virtual Server 2005 last fall. Analysts said Microsoft entered the market primarily to give users of older Windows versions an upgrade path to new hardware.

But consolidating Windows NT servers with Virtual Server requires users to run a copy of Windows Server 2003 as the host operating system. That approach has a greater performance overhead than Microsoft's hypervisor architecture will, acknowledged Ben Werther, a senior project manager for Windows Server.

In contrast, VMware's rival ESX Server, first released in 2001, doesn't require a host operating system. Instead, it uses a hypervisor layer that runs directly on the hardware.

At WinHEC, Microsoft officials showed diagrams with the planned Windows hypervisor code layer, which will divide a system's resources among different virtual machines. Longhorn users will be able to configure the operating system for a virtualization "role," stripping out unneeded functionality in a so-called MinWin configuration, said Werther. But, he added, it's still not clear if the hypervisor technology will make the first release of Longhorn Server that's due in 2007.

Performance also is expected to improve as a result of the hypervisor's support for upcoming virtualization extensions in chips from Intel Corp. and Advanced Micro Devices Inc.

Steven McDowell, a division marketing manager at AMD, said CPU overhead currently runs at 10% to 30% on virtualized servers. But, he added, AMD hopes the overhead will be "negligible" with its Pacifica virtualization technology, for which AMD released a specification last week.

Bob Armstrong, director of technical services at Delaware North Cos., said the Buffalo, N.Y.-based hospitality services provider is happy with the software it bought last year from VMware, which is a subsidiary of EMC Corp. Armstrong said Microsoft is heading in the right direction by building virtualization technology into its operating system, but he fears that "it's going to take them a long time."

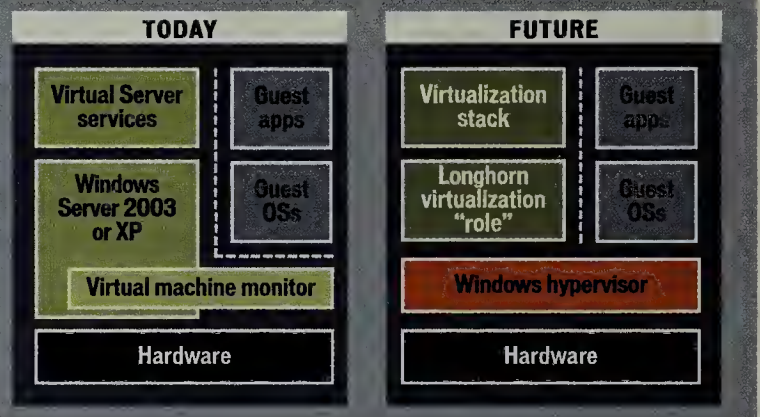
Frank Gillett, an analyst at Forrester Research Inc., said it will take at least two years for Microsoft to deliver on its Longhorn virtualization plans. In the meantime, he added, VMware must figure out how to stay ahead of Microsoft and Linux vendors, with general-purpose management software as one option.

Raghu Raghuram, senior director of strategy and market development at VMware, said Microsoft is acknowledging that "if you want to get into the data center, you need to run an architecture that runs like ESX Server."

But, Werther said, "the real challenge will be managing hundreds or thousands of virtual machines across a data center." Microsoft has significantly increased its investment in virtualization management across its System Center family of management tools, he added. **54107**

MICROSOFT'S VIRTUALIZATION PLAN

After Longhorn ships, a thin Windows "hypervisor" layer will abstract hardware into one or more virtual machines and divide resources based on policies dictated by a virtualization software stack.



Continued from page 1

PMOs

itor IT projects, he said.

Nodar spoke at a PMO best-practices conference held here last week by the International Quality & Productivity Center. At the event, Nodar said that he and the other five members of the Cancer Society's PMO have been sensitive to such concerns since the group was created in 2000.

"We didn't want to become a source of bureaucracy," said Nodar. "But we knew that we needed a certain level of governance and discipline over these projects."

Challenges Get Clearer

The challenges are becoming clearer as a growing number of IT organizations create PMOs in an effort to improve upon IT's historically abysmal record of delivering projects on-time, within scope and under budget.

It's a tricky balancing act for many PMO managers, attendees said. "I think this is the fundamental question as to whether the PMO is going to succeed or not," said Jack Duggal, a principal at Projectize Group, a Simsbury, Conn.-based consultancy.

By establishing a firm set of project management processes, PMOs are forcing IT project managers to abandon oversight approaches they've been using for years, Duggal said. "You're changing their religion; you're taking away their freedom" to choose, he added.

Several PMO managers said that one way to gain acceptance from IT project managers is to introduce a PMO slowly and build on project successes to gain their trust.

With an IT project completion rate above 90% at Meijer Inc., IT project managers "are pretty committed" to the methodologies espoused by the company's PMO, said Jim Morse, program office manager at the Grand Rapids, Mich.-based retailer.

Meijer's PMO tries to gain the trust of its project managers by giving them project status reports before they go to senior executives.

At the American Cancer Society, Nodar and his team hold regular PMO issue meetings where IT project managers can gripe about any requirements they may view as overly bureaucratic and can suggest revisions. For instance, one project manager recently recommended that the PMO adopt an off-the-shelf project management tool that was better than the system that was in place, said Nodar.

"We encourage feedback from our project managers. They're comfortable enough with us that they can be blunt," he added.

Government agencies can also benefit from a PMO, attendees said. Since it established a PMO in December 2002, the IT division for the state of Florida's Department of Health "hasn't had any 'black hole' projects, and that is a success for a government agency," said Jane Matthews, a project manager at the Tallahassee-based division.

For companies that are in heavily regulated industries such as financial services, it's a bit easier to sell IT project managers on the need to document their project management processes, suggested Jennifer Code, executive vice president for program management within Citigroup Inc.'s technology infrastructure group in New York.

"People don't blame us; they blame the regulators" for those requirements, Code noted. **54093**

Beating Bureaucracy

Tips for striking a proper balance with a project management office:

- **Allow IT project managers** to gripe; act upon reasonable requests from them.
- **Gradually implement a single approach** to project management. Show value through initial successes to gain acceptance.
- **Track the time savings and other benefits** of a disciplined project management approach.
- **Provide incentives for** project managers to follow PMO-approved methodologies.

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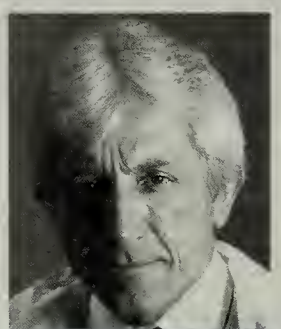
DON TENNANT

The Opteron Option

QUICK: Who was Employee No. 1 at Sun Microsystems — Scott McNealy or Bill Joy? OK, it's a trick question. The answer is neither one. Unless you're really into this stuff, you've probably never even heard of the individual who holds that distinction.

His name is Andy Bechtolsheim. Like McNealy and Joy, he was one of Sun's co-founders, but he's kept a low profile over the years. Bechtolsheim left Sun in 1995 to form a networking start-up called Granite Systems that was acquired in 1996 by Cisco. He returned to Sun in February 2004 by way of Sun's acquisition of Kealia, a server design company he co-founded.



DON TENNANT is editor in chief of *Computerworld*. You can contact him at **don_tennant@computerworld.com.**

What's interesting about all this is that since his return to Sun, Bechtolsheim has been shepherding a hush-hush project, code-named Galaxy, to develop a next generation of servers. What I find particularly eyebrow-raising is that this entire line will be devoid of Sun's Sparc microprocessor technology. It will be based entirely on Opteron microprocessors from Advanced Micro Devices.

Of course, Sun is already a poster child for AMD, having released its first Opteron-based systems last year. But Galaxy promises to dramatically advance Sun's commitment to AMD; Sun's chief cheerleader for the Opteron is none other than Bechtolsheim. It makes you wonder how long Sun will maintain its enthusiasm for keeping Sparc alive.

The momentum behind AMD's Opteron technology is pretty remarkable. Sun's interest aside, IBM is all over it, and now even Hewlett-Packard, the company that jointly developed Itanium, has joined the Opteron fold.

I recently spoke with Ann Livermore, executive VP of the technology solutions group at HP, about what must have been two tough decisions: to pull out of that 10-year Itanium co-development pact with Intel, and to suck it up and offer the Opteron-based systems that customers wanted. Livermore's position was characteristically straightforward and down to earth: Citing "some great price/performance" with AMD's technology, she basically said HP needed to give customers what they want.

She also made the point that having more than one chip supplier is simply a good business practice. "We always have to have the most competitive price/performance points in our road maps," Livermore said. "And having two providers allows us to be able to do that."

Seems reasonable enough. Which is why Dell's Intel-only strategy seems shortsighted. I was struck by IDG News Service correspondent Tom Krazit's story in last week's issue, in which he reported that while HP, IBM and Sun all plan to use AMD's new dual-core Opteron chips, Dell remains an AMD holdout [QuickLink 53954]. The reason it struck me is that I find it unacceptable for a vendor to unilaterally restrict customer choice.

Krazit cited a Dell user, Russ Miller of the University of Buffalo, who expressed concerns about the bus architecture design of Intel's forthcoming dual-core Xeon processors. Miller has told Michael Dell that he wants an Opteron option, which he considers "important to our industry."

One of the reasons Dell executives have given for avoiding AMD is that they don't want to lose the price breaks they get from Intel for their fidelity. I'm not so sure that customer choice being held hostage by Intel is a good thing. Fortunately, the way the momentum's going, it may not be all that long before Intel loses that luxury. **54068**

Don Tennant

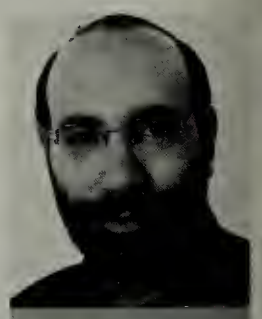
MICHAEL GARTENBERG

Apple Takes Major Leap With Tiger

WANT TO SEE what the future of personal computing looks like? Don't wait for Microsoft to show you; go out and get yourself a copy of Apple's latest operating system release, OS X Tiger. It's that good.

For the past few weeks, I've been using the final version of Tiger. There are a lot of nice things in it. For example, iChat2, Apple's instant messaging client, runs rings around the stuff on Windows, and on a G5, you can run a four-way videoconference in seamless full-screen mode. Try that on a PC.

The Dashboard application, including the concept of HTML applets showing contextual snippets of information, is very useful, and like most Apple stuff, it's just plain cool.



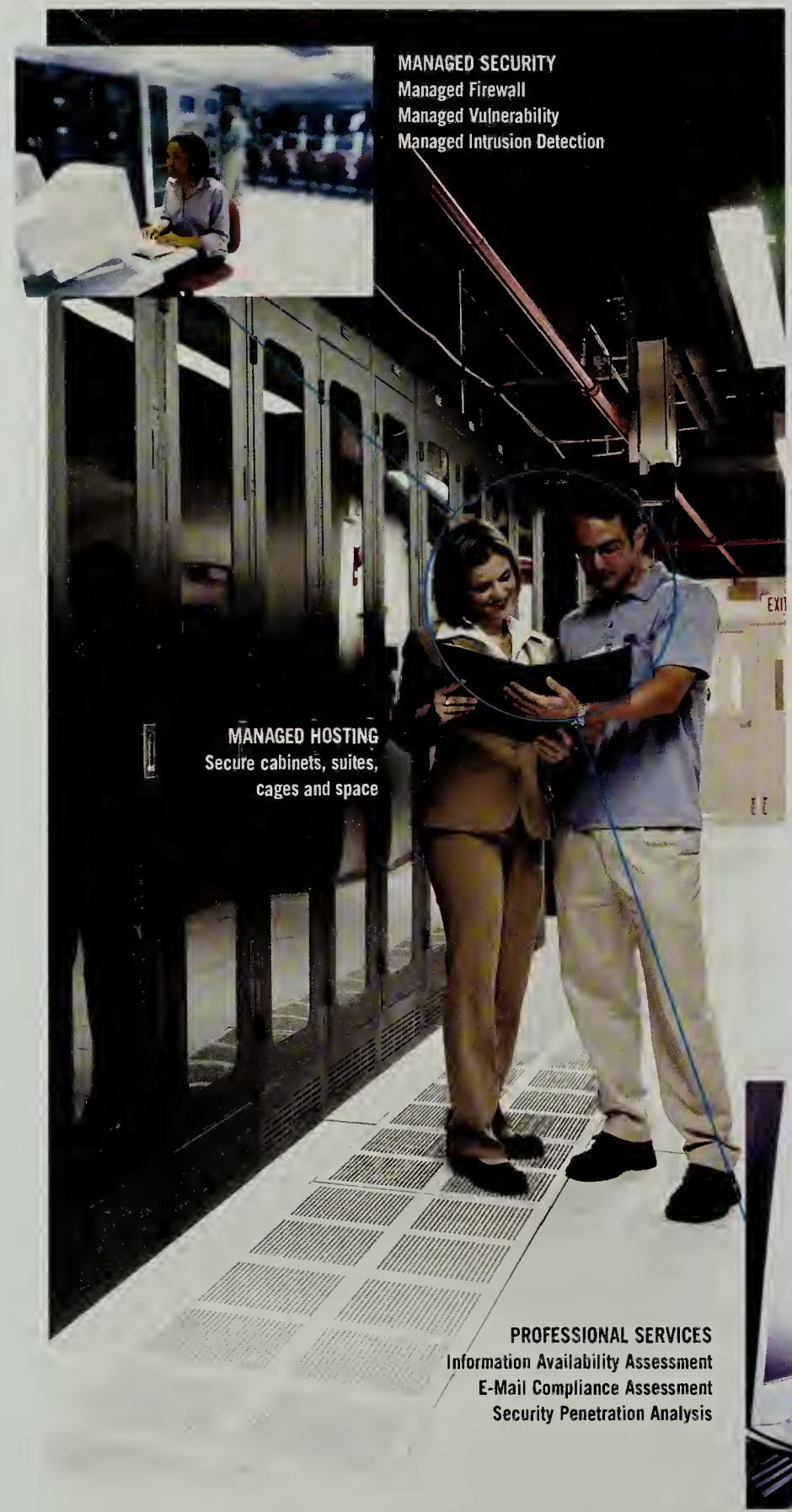
MICHAEL GARTENBERG is vice president and research director for the Personal Technology & Access and Custom Research groups at Jupiter Research in New York. Contact him at **mgartenberg2@optonline.net.** His weblog and RSS feed are at *http://weblogs.jupiterresearch.com/analysts/gartenberg.*

But what makes Tiger a big deal are two features that boost personal productivity in ways no PC operating system has ever matched (at least not yet): Spotlight and Automator.

Spotlight's search is integrated directly into the operating system and is therefore much better at finding things than competing programs on Windows. Hierarchal file storage was a great leap forward 20 years ago, when hard drives were measured in tens of megabytes. It worked well then, but not today, when PCs have hundreds of gigabytes of information in local storage and in e-mail, and when data types have been expanded to include pictures, music and video.

With Spotlight, users for the first time aren't forced to learn the intricacies of a hierarchal file system and then spend hours trying to keep organized. They know that when they need to use some information that's some-

THE NEED IS TO HAVE ACCESS TO INFORMATION
NO MATTER WHAT.



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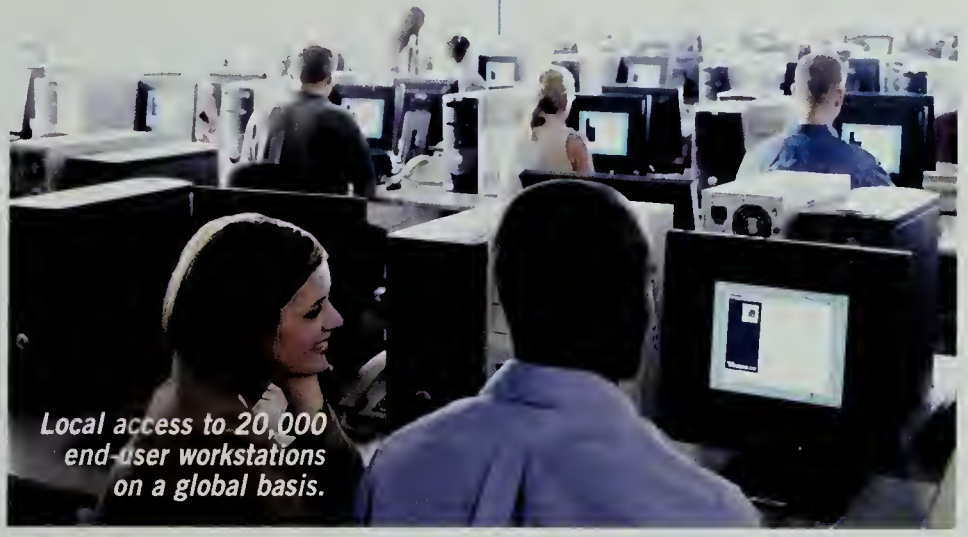

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*The Radicati Group. Radicati White Paper "Microsoft Exchange 2003 Total Cost of Ownership."

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where in their computer, Spotlight will let them find it and then manipulate it.

The best part: Since information is easiest to find when tagged, Apple added a visual scripting program called Automator, which is based on AppleScript and makes it a snap to quickly tag information, so it doesn't matter where on your hard disk the data actually lives.

Add in the concept of "smart folders," which work like the smart playlists in iTunes, for constantly monitoring and updating information in real time, and users are finally free to focus on information and not information management.

Want more fun? Use the Safari browser to monitor your RSS feeds and then create smart searches within them. Think of it as your own personal Web service. (And finally there's a simple way to see if a site supports RSS and then easily add it.)

The real challenge for Apple is to make sure that the market understands what it has done. My advice to Apple? Turn up the volume on this release several notches so it doesn't get lost in the checklist wars. (We have search — check. They have search — check.)

If you spend too much time organizing your stuff or just can't find it, you need to take a close look at Tiger. There's a real experiential difference. What's missing? Not much. I'd like to see more RSS support so I can better read and search off-line, and I wouldn't mind seeing Microsoft add Spotlight support for Entourage. Otherwise, this operating system is near nirvana for productivity.

There's no doubt that a lot of similar concepts will be included in the next version of Windows. But Longhorn won't be here for at least 18 months. It will be interesting to see what Apple has for us by then. **53958**

MICHAEL H. HUGOS

Just a Handful of Techniques

IN SPITE OF all the complexity inherent in business and the constant change in technology, there is just a small set of techniques for IT professionals to use in developing any information system. In fact, there are six. I call them the "core techniques," because they encapsulate a complete set of skills to develop or enhance any information system. They have been evolving for 30 years or more, and every IT professional has at least heard of them if not actually used all of them.

The first technique is **joint application design**, for pooling the collective ideas of business and technical people. The second is **process mapping**, for drawing out existing workflows and designing new ones. Then there is **data modeling**, for defining the types and volumes of data that a system will handle. Next is **system prototyping**, for modeling a system's user interface and technical architecture to make sure they will work as expected. The fifth technique is **object-oriented design and programming**, for creating systems from predefined and reusable software components. And the last technique is **system testing and rollout**, for debugging and fine-tuning a system to fit user needs.

There is also a simple, powerful approach for organizing the work in any development project, whether it's installing a software package or creating a whole new system. I call it the "define, design, build" approach [QuickLink 53370], because those three steps are a part of every project. You define what needs to be done, you design a way to do it, and then you do it. The tasks involved in these three steps are all accomplished by using combinations of the core techniques. Project teams making skillful use of these techniques can respond effectively to any system development challenge.

MICHAEL H. HUGOS is CIO at Network Services Co., a distribution cooperative in Mount Prospect, Ill., that sells food-service and janitorial supplies. He is the author of *Building the Real-Time Enterprise: An Executive Briefing* (John Wiley & Sons Inc., 2004). He can be reached at **mhugos@nsconline.com.**

This three-step approach and the six core techniques are very much like what an architect follows. As I noted in last month's column, this has been on my mind because I'm in the middle of a major house-remodeling project for which I've hired an architect.

My architect produced a complete set of drawings for the new floor plans, the wiring and plumbing plans, and the interior finishing details. Along with the drawings came a complete set of specifications for all the work and materials. Every time I want a change, we go through a process that updates those documents.

Whenever I change my mind about design details or change the scope of the project, my architect guides me through a process of defining what I'm talking about and creating a design. Then, if I still like it (and can afford it), we build it. Between dealing with me and dealing with the contractors and the inspectors, he is doing a very good job of handling a complex situation.

As I see how an architect does his job, I am getting clarity on how we systems developers can do ours. We can drop a lot of the procedural complexity and bureaucratic paperwork that has bogged us down on our development projects and hasn't helped our success rate. My architect makes disciplined use of a small set of techniques for defining, designing and building that are amazingly similar to the core techniques for developing information systems. And architects have a very high rate of success on their projects. **53699**

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READERS' LETTERS

Former Attendees Mourn Comdex Demise

I WAS A REGULAR ATTENDEE of Comdex during the mid-'90s, when I was CIO at Guess Jeans ["No Comdex This Year? No Problem, Say Users," QuickLink 53515]. I found the show to be both useful and educational. We brought several ideas back to our offices and used the knowledge as a catalyst to help us think of solutions that were out of the box. It's too bad the show lost its way.

Joseph J. Fink
Consultant, New York, joefi@vzavenue.net

AS AN INSTRUCTOR of Internet technology, I was sorry to learn that there will be no Comdex again this year. I attended the expo on a regular basis over the years and enjoyed the chance to see where the industry was heading. In the article, Barry Cohen, the vice president of technology at a real estate investment management company who admits that he never attended Comdex, suggests an IT peer discussion venue. That would be nice, but it wouldn't pay enough to turn on the lights. What Cohen and other anti-Comdex snobs likely don't realize is that workshops and lecture series, often centering on "IT problems and how to fix them" (what Cohen said he is looking for), were available. Was Comdex full of glitz and high-tech gizmos? Yes! But that's part of what made it fun.

Vicki Cox
Laramie County Community College, Cheyenne, Wyo.

A Modest Proposal

I THOROUGHLY ENJOYED Mark Hall's article, "Secure the People," about end-user security training [QuickLink 52486]. Punishing workers who flout security procedures is not only right, it's most essential. I would add a different type of punishment to the lost day of vacation that Hall suggests: the mocking post. A few caveats: The mocking post should use Velcro straps instead of metal buckles and wooden yokes (more modern and humane). I strongly believe that the mocking post can be lots of fun at lunchtime, especially during Bring Your Kids to Work Day.

Gopal K. Kapur
President, Center for Project Management, San Ramon, Calif.

Moore Follows in Marconi's Footsteps

JAMES NICCOLAI'S TRIBUTE to Gordon Moore ["Gordon Moore Looks Back, and Forward, 40 Years," QuickLink 53773] was both a moving and meaningful salute. Moore's 1965 prediction created a worldwide industry standard that has extended computing from the domain of the highly technical to the realm of the eminently practical.

In recognition of his innovative contribution to the technology that drives our daily lives, his entrepreneurial spirit and his devotion to the collaborative genius that inspired the genesis and success of Intel, the Marconi Society recently named Gordon Moore its 2005 Lifetime Achievement Award recipient.

Moore's unflinching quest to speed the delivery and expand the access of information to a global public reflects the spirit of the Marconi Society's noted namesake, Guglielmo Marconi.

John Jay Iselin
President, Marconi Society at Columbia University, New York, jji9@columbia.edu

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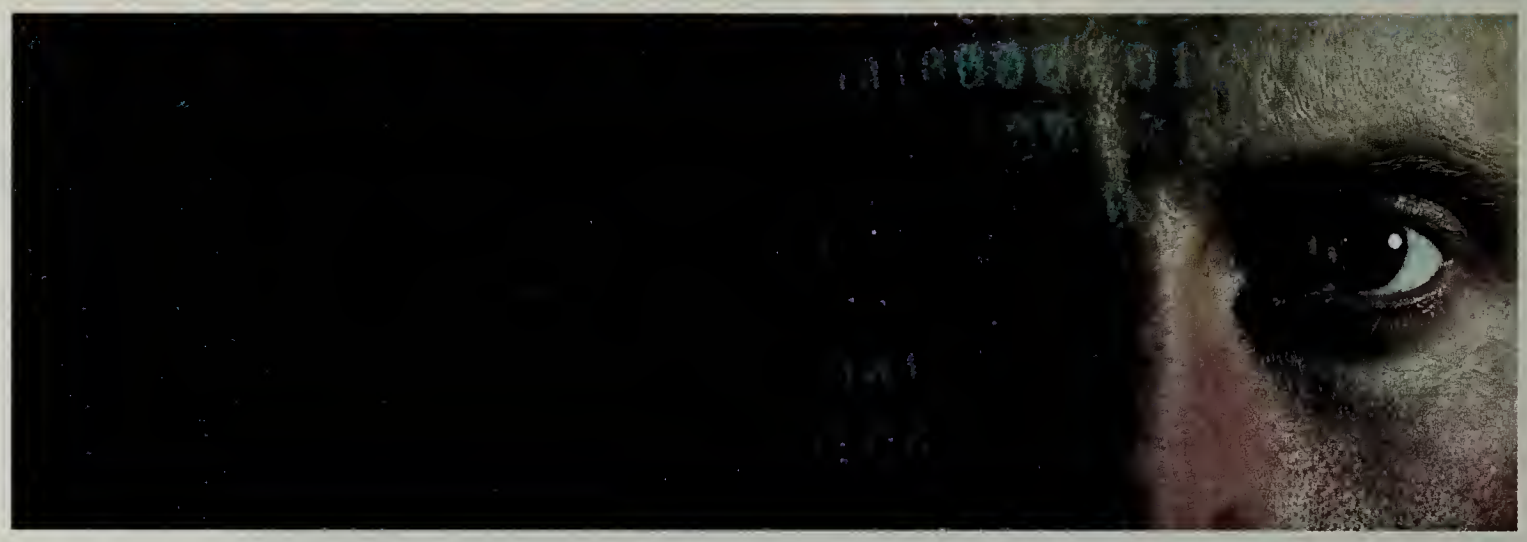

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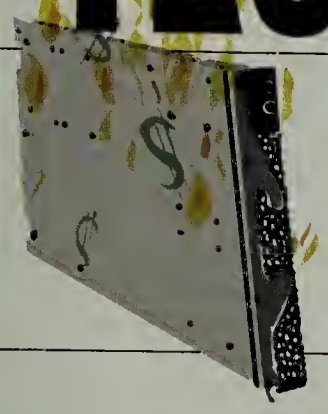


Edgy About Blades
Even as analysts predict healthy growth in blade server sales, some IT organizations are hesitant about authorizing broader deployments. Here's why. **Page 24**

QUICKSTUDY
Python
This object-oriented, open-source programming language is often used for rapid application development. Python's simple syntax emphasizes readability, reducing the cost of program maintenance. **Page 30**

SECURITY MANAGER'S JOURNAL
The Cost of Securing The People's Privacy
A proposed legislative bill on consumer privacy has C.J. Kelly crunching the numbers for a fiscal impact analysis. **Page 31**

Companies are using synthetic backup to cut backup and recovery time — and minimizing downtime in the process. **BY LUCAS MEARIAN**

BERNARD SHEN, a technology consultant at aerospace company BAE Systems North America Inc., went from shipping 1,200 data archive tapes to an off-site storage facility every 90 days to sending just 200 over the same time period. He did it by storing only incremental changes to his company's data.

Shen says the business case for incremental data backup was a no-brainer, but selling the idea to his IT team wasn't easy. "There is a tremendous amount of skepticism around it," he says.

While Rockville, Md.-based BAE saves incremental changes across its 25TB storage-area network (SAN), those data slices can be combined with previous full-server backups to create what's known as a synthetic backup, from which a systems administrator can then restore a file or application if it becomes corrupted or data is lost.

Although Shen has eliminated full backups on his file servers with synthetic backups, he still performs them on his database servers because the technology he uses doesn't support block-level changes.

Adoption of synthetic backup is increasing rapidly because it saves systems administrators from having to shut down application servers to perform full backups and it reduces the amount of data backed up to disk and archive tapes. The changed data that's saved amounts to less than 10% of all data, according to analysts.

Relatively inexpensive disk-to-disk or disk-to-disk-to-tape architectures are rapidly gaining acceptance by IT organizations facing shrinking backup windows, according to Mike Kahn, an analyst at The Clipper Group in Wellesley, Mass.

The pain points users are addressing with synthetic backups are their recovery point objective (RPO), their recovery time objective (RTO) and the ever-growing backup window, analysts say. RTO speaks to how long it takes an organization to be up and running after a disaster or data loss, and RPO refers to how old the recovered data will be.

Ghyslain Boisvert, executive director of the high-performance computing laboratory at the University of Montreal, uses Time Navigator Server from Atempo Inc. in Palo Alto, Calif. With it, he creates a full backup of research data off-line from incremental backups made to tape libraries from Storage Technology Corp. and Dell Inc.

Boisvert said it still takes him seven hours to perform a synthetic full backup from incrementals for about 660GB of daily data — not much shorter than the 10 to 12 hours standard full backups take. But the synthetic backup has no effect on his production servers because they no longer need to be shut

BERNARD SHEN, a technology consultant at BAE Systems, says, "The beauty of this technology is that you're doing disk-to-disk backup, and then in the morning, the backup goes from disk to tape."

MANUELLO PAGANELLI

INCREMENTAL IMPROVEMENT

down as they did during backup to a tape library.

By keeping incremental backups on intermediate disk arrays, also known as virtual tape libraries (VTL) or secondary storage, IT shops can determine the amount of time it will take them to restore a file or block of data without having to go through the lengthy process of finding data on an archived tape. All data written to disk is online and quickly accessible through indexes.

Shen, whose company has 25,000 employees in 30 states, currently performs one incremental backup a day across 33 application servers using an appliance from StorServer Inc. in Colorado Springs. By midyear, he hopes to have 100 out of 170 servers running on it. "The beauty of this technology is that you're doing disk-to-disk backup, and then in the morning, the backup goes from disk to tape," Shen says. "The disk-to-disk backup can run 15 [server] backups at a time."

Bill North, an analyst at IDC in Framingham, Mass., says synthetic backup technology has been around for several years, but its adoption rate is difficult to track because the functionality is usually presented as a tool in many mainstream backup products.

Based on anecdotal evidence, North says, user angst over losing data by not performing full backups has kept most companies from implementing it. "My suspicion is that serious data protectors will still do full backups, but you can certainly reduce the frequency of doing that, making the backup window look a lot more cheerful," he says.

Synthetic backup is offered in products from Veritas Software Corp., IBM's Tivoli Software division and CommVault Systems Inc., as well as from several start-up vendors, such as Sepaton Inc. in Marlboro, Mass.

"While it depends on the product, I think that most out there today are pretty reliable. It's just one more layer of abstraction, and the advantages for the user are significant," North says.

Full Backups Broken

Kahn says synthetic backups are bound to take hold because the very concept behind full backups is broken. The time that it takes to perform full backups is steadily growing out of control.

Michael Passe, a senior storage architect at Beth Israel Hospital in Boston, said his weekly backups now eat all but four hours of every weekend. "My production-control folks do a lot of backup management," he says.

Passe's storage architecture consists of a 50TB SAN made up entirely of EMC Corp. storage arrays. He recently moved to Veritas NetBackup 5.0, which has a synthetic backup tool, and Passe says he's interested in its potential to reduce his backup window.

Like most users who purchase a backup product with a synthetic feature, the University of Montreal's Boisvert bought Time Navigator Server for full backups, but he liked the idea of synthetic backup so much that he decided to try it. Now, instead of shutting down production servers for 12 hours every week, Boisvert performs a standard full backup only once a year. He says he performs incremental daily backups and a synthetic full backup every three months "to make sure restores are easier to do."

"Usually files that have just been migrated into our tape archive are still on disk as well. That prevents us from going back to tape all the time for restores," Boisvert says.

Not everyone is convinced that synthetic backups are reliable. Ray Sears, a senior storage architect at Affiliated Computer Services Inc., a $4.1 billion business process and IT outsourcer in Dallas, likes the concept behind synthetic backups but believes it's not fully baked yet.

Sears uses NetBackup and purchased a disk-based Pathlight VX VTL last year from Advanced Digital Information Corp. in Redmond, Wash., to reduce the backup window for about 600 Sun, Hewlett-Packard and IBM AIX servers on his 20TB SAN. The disk-to-disk VTL technology shrunk the backup window from 24 hours to less than six.

The next logical step would be for Sears to begin using Veritas' synthetic backup element. He says that when he deployed Pathlight, synthetic backup "wasn't as bulletproof as I would have liked it to have been," and it took him longer to perform a full data restore than it did to perform a full backup.

"It's manageability issues more than anything else," Sears says. "I think it's still a really immature technology for a lot of larger companies, who've got HIPAA requirements, FDA requirements and the new Sarbanes-Oxley requirements, to say that we're going to go away from full backups."

Bells and Whistles

According to analysts, only about 3% to 5% of data changes in any given file system in a given week. Therefore, if you're using synthetic backup to protect a 200GB file system, you're actually backing up only 6GB to 10GB of data, not all 200GB.

Shen said that while the day-to-day technical management of an incremental environment is more complicated to use — "the software is a little more sophisticated, and it has more bells and whistles"— it's well worth the added education required for his staff.

Shen says his StorServer installation cost $10,000 and was installed in two days, and the first 15 servers were backing up to it on the third day.

The big return on investment came with having to spend only about $150,000 on back-end storage, as opposed to the $450,000 Sears would have spent if he were to size his environment for full backups.

"That's because your system does not have to be sized to capture the larger volumes of data," he says. "In my case, we can really benefit from the incremental backup because we have millions of files and only a small percentage of them change every day."

53849

CONTINUOUS DATA PROTECTION:
Good to the Last Byte

Take TiVo and apply it to a server backup environment, and you've got an approximation of continuous data protection (CDP), or time-addressable storage.

CDP technology saves all application changes as they are happening at the bit level, time-stamps them and moves them off to disk to be stored. If a data restore is required, a systems administrator can literally dial back an application to any point in time, even seconds before a virus struck a server. That contrasts with synthetic backups, in which a rules-based engine determines how often data snapshots or incremental data copies are taken to capture changes made to files or volumes.

"The big benefit of [CDP] is you're never caught between 4:07 p.m. and 4:10 p.m. saying, 'I wish I had data from 4:08,' " says Mike Kahn, an analyst at The Clipper Group.

Harold Weiss, a systems engineer at Memphis-based Baptist Memorial Health Care Corp., which runs 15 hospitals in three states, has been testing Revivio Inc.'s CPS 1200 CDP product. He rolled it out in February and plans to put it into production in May. Weiss has more than 660 Wintel servers and 30 HP-UX servers, along with 96TB of storage on a SAN that he expects to grow to 158TB by April. Weiss initially installed the Revivio CPS 1200 to protect financial data contained in a database from Lawson Software Inc.

"We've been able to recover in our test environment the loss of a system in 15 minutes from the time we caused the database to corrupt itself," he says. "If we were doing that without these [CDP] products, we'd have to do a complete restore. That's taken us eight hours."

Weiss is so enthusiastic about the technology that he plans to use CDP to back up all patient records, including radiological images and other sensitive patient information.

"When you create your data sets, those can reside across different servers and still be part of a single data set inside this continuous protection system," he says. "So if I have to go do a restore, I can go and restore all those systems to the same point in time."

There are two conceptual differences between straight synthetic backup and continuous data protection: Synthetic backups require sysadmins to choose how often and at what points in time they want to perform incremental backups. CDP schemas create logs of any file or volume that has changed and then provide an instant restore from any point in time when queried to do so.

However, there are as yet no products for building up incremental backups for a full synthetic backup or restore.

Weiss also cautions other users to continue performing full backups and storing that data at a remote site.

"If you have total meltdown of the data center, you're going to need to recover," he says. "But these products are good for highly critical stuff you absolutely have to be able to recover in a very timely manner."

– Lucas Mearian

CONTINUOUS DATA PROTECTION VENDORS

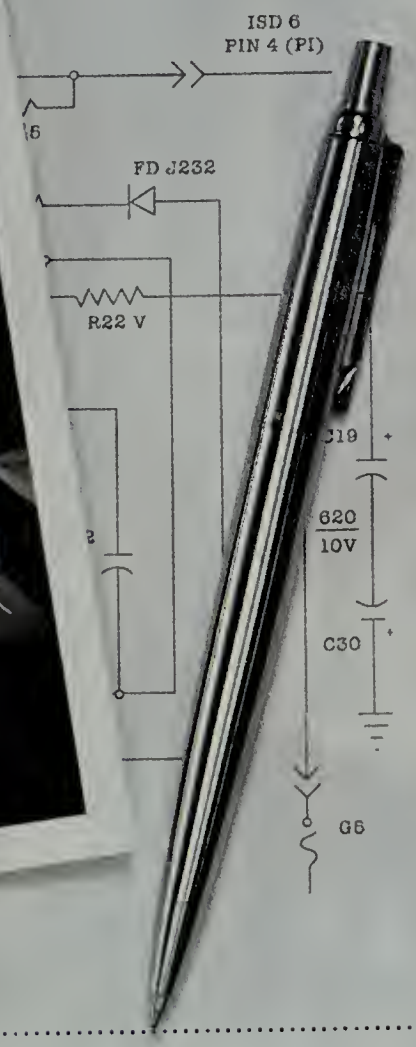
Revivio Inc.
Lexington, Mass.
- Hardware and software

Mendocino Software
Fremont, Calif.
- Hardware and software

Storactive Inc.
Marina del Rey, Calif.
- Software only

TimeSpring Software Corp.
Newport Beach, Calif.
- Software only

SDLT 600 MEMORY TEST



TEST #345

SDLT 600 Results :

Cognitive Memory Skills :	☐	Speed :	☑	Manageability :	☑
High Capacity :	☑	WORM :	☑	Compatibility :	☑

COMMENTS

TESTED BETTER DLT

In repeated time trials, the SDLT 600 never reached the cheese, or even left the starting line for that matter. Perhaps tapes don't like cheese. However, as for data backup capacity, the SDLT 600 is a clear winner. It has more capacity and more speed than LTO-2 and AIT-3. It also includes DLTSage™ diagnostic management software and DLT*ice*™ archival WORM functionality. How do we know? It's been tested. For more info and to see the whitepaper, visit DLTtape.com.

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EDGY ABOUT BLADES

Despite initial enthusiasm, some users are still hesitant about widespread deployment of blade servers.

HERE'S WHY.

BY ROBERT L. MITCHELL

WHAT'S NOT TO LIKE about blade servers? The technology is sleek and sexy. With fewer cables to interconnect, blades, which share a common backplane, are easier to manage than other types of servers. They take up less floor space, and vendors are advertising them heavily as an alternative to stand-alone and rack-mounted servers. Yet even as analysts predict growth, some IT organizations are hesitant about authorizing broad deployments. IT professionals cite concerns about heating and power, vendors' proprietary designs, the relative immaturity of the technology and premium prices.

While market research firm IDC predicts strong growth for blades over the next few years, Gartner Inc. projects more modest gains, citing user concerns (see chart, page 28). "By 2009, only approximately 16% of servers installed worldwide will be in the blade format," says Gartner analyst Jane Wright.

Cooling and power top the list of concerns for Capgemini clients, says John Parkinson, chief technologist at the Chicago-based IT consultancy. He says that in some cases dense blade deployments have required "major upgrades to power . . . and air handling."

Dealing with power and cooling issues can add significantly to the total cost of ownership, says Umesh Jagannatha, senior manager of technical services at Embarcadero Systems Corp. in Alameda, Calif. Embarcadero uses blades for a port security application but has passed on other uses for now.

Derek Larke is currently testing an IBM BladeCenter but has all but decided to go with 1U (1.75 in. tall) servers. "This thing is cranking out heat like there's no tomorrow. We noticed that the server room temperature has gone up," says Larke, manager of information services at Fun Sun Vacations Ltd. in Edmonton, Alberta.

Tim Dougherty, director of eServer BladeCenter marketing at IBM, says the problem isn't blade-specific but reflects an overall trend toward increasing processor density in data centers. IBM's BladeCenter design won't overheat, he says. But blade-filled server racks can create hot spots in the data center that air conditioning units can't handle, so administrators commonly leave racks partially empty in an effort to distribute the heat more evenly.

Robert Kreitzer, vice president of the Intel server engineering team at KeyCorp in Cleveland, says he watched IBM representatives demonstrate how they could cool a fully loaded BladeCenter rack, but the real-world advice he received was different. "I asked them full on, 'You don't really recommend filling the rack, do you?' " says Kreitzer, recalling that the representatives acknowledged that they didn't recommend it.

Wright says she regularly fielded calls about overheated blade racks a year ago. That problem has disappeared because vendors no longer fill racks with blades, she says. IBM counters that many of its customers do, in fact, operate with fully loaded racks.

Hesitant to Buy

Wright says blade server technology will evolve rapidly in the next two years to address those problems, so some users have delayed purchase decisions. "IBM openly tells customers it's working on a new way to cool

Continued on page 28

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1
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2. **Claim info filed accurately.**
3. **Vendor receives complete data.**
4. **Quotes researched easily.**
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Continued from page 24

blades, and it may involve water or liquids." That will likely mean a new chassis format. "Customers hear that a massive change is coming by 2006-2007, and they hesitate to buy," she says.

IBM acknowledges that a redesign is in the works. But "we see nothing that's going to take us away from air cooling at the box level through 2007-2008," says Scott Tease, product marketing manager for eServer BladeCenter.

Interoperability concerns derailed Kreitzer's initial assessment of blades. At the time, IBM offered a storage blade that was incompatible with KeyCorp's standard, which was based on products from Brocade Communications Systems Inc. Last fall, IBM opened up the specification for its BladeCenter architecture to allow best-of-breed I/O devices. Since then, Brocade and many other vendors have committed to design BladeCenter-compatible equipment. "What customers told us was, 'If that fabric switch isn't the one we've standardized on . . . don't talk to me,' " says Dougherty.

Now Kreitzer is taking a second look. But he still has a concern: Because every vendor has a proprietary chassis, third-party I/O blades require a vendor-specific interface. For example, a Brocade switch designed for insertion into IBM's BladeCenter can't be used in an HP blade server chassis or vice versa. But Wright says most users are "resigned to that" and are just happy to have name-brand options for I/O within the server blade chassis.

Leveling the Playing Field

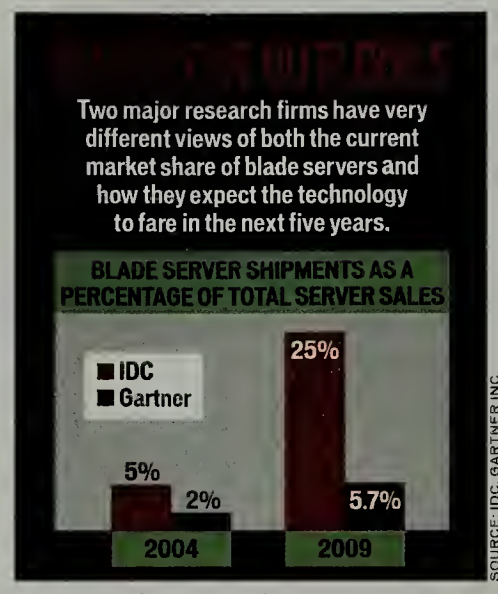
"Customers would love to have interoperability and interchangeability among things like I/O modules," says Kevin Kettler, chief technology officer at Dell Inc. The architectures, he adds, are still "in their late infancy." A late entrant into the blade market, Dell would like to see more standards around bladed architectures to level the playing field. But market leaders IBM and Hewlett-Packard Co. still prefer to develop their own "ecosystems" where third parties can offer vendor-specific implementations of their products.

"IBM opening up its technology is not a significant step. There need to be some standards that handle interoperability," says a global IT manager at a major automaker who asked not to be named. IBM's Dougherty notes that administrators can still install blade server chassis from multiple vendors into a single rack. "The only thing we lock you into is the chassis," he says. A BladeCenter chassis can hold 14 blades.

Dougherty acknowledges that a common standard for add-in I/O devices — but not processor blades — may eventually come to pass. But for now, says John Humphreys, an analyst at IDC, "the Brocades of the world seem to be willing to sign on to provide multiple products in the blade space."

Ed Mulligan, managing director of technology services at The Bank of New York Inc., expects blade server architectures to deliver industry-standard approaches to network and storage connectivity. "Until such time, the risks outweigh the benefits when considering integrating this technology at an enterprise level," he says.

Eventually, common standards could emerge. "There are lots of discussions about the potential for InfiniBand," says IDC analyst Vernon Turner. Jim Pappas, director of initiatives for Intel Corp.'s Digital Enterprise Group, says InfiniBand and Ethernet are the frontrunners. But that's still years away. Only after heating problems are resolved will vendors turn their attention to issues such as interoperability and standardization, says Gartner's Wright. And any standard will require the cooperation of both HP and IBM, which together own more than three quarters



of the market, according to IDC.

Another inhibitor to broad acceptance is the premium charged for some blade servers. "Price is the No. 1 thing," says Kreitzer. He evaluated blades last November and found 1U servers more attractive. Vendors say prices are competitive with those of rack server offerings, but the bottom-line numbers some users are seeing don't always add up. Wright estimates that blades cost about 10% more per server when the cost of the chassis is factored in.

"At the end of the day, 1U servers were cheaper than blades," says Larke at Fun Sun. Jagannatha at Embarcadero says the pricing he received for individual HP DL360 and DL380 servers was also cheaper than the price of entry for blades. That comparison isn't always fair, says Humphreys, because server blades require buying a chassis to hold them. The per-blade costs typically aren't competitive unless the chassis is at least half filled. And blades can be cheaper than rack-mounted servers in some situations, such as when a group of blade servers can share a storage-area network interconnect rather than requiring individual host bus adapters for each server, says Wright.

Finding Space Elsewhere

Some IT organizations have passed on blades because they've freed up plenty of floor space using server virtualization technologies.

"We have had considerable success with VMware and server consolidation in rack-mounted servers, and we haven't had any strong drive to go to blade servers," says Phil Zwieg, vice president of technology services at The Northwestern Mutual Life Insurance Co. in Milwaukee. The company, which recently built a new data center, has consolidated 330 server-based applications into virtual machines that run on just 45 1U servers. Zwieg plans to take another look at blades in 2006 but says he still has questions about heat and standardization issues.

Companies like Northwestern that are using virtualization may find that it's more efficient to go with big, multiprocessor servers and carve those up into virtual machines, says Wright. Although blades could be used for this purpose, multiprocessor blades start to get bulky. "A lot of the value of blades is the modular design," which may be one reason why four-processor blades haven't taken off, she says.

While vendor marketing hype would have customers believe that blades will take over the server room, replacing stand-alone and rack-mounted servers as the preferred format, the technology may end up as simply another option — one for situations where a highly modular design is the best fit. "It will be just another format, just another choice," Wright says.

But while some organizations aren't yet ready to buy, none of the users interviewed for this story are writing off blades entirely. In fact, most say they will watch the technology closely as it matures. "There are efficiencies," says Larke. "That's why we're considering them." **53851**

DRIVING A HYBRID

Ultrathin servers eventually will take their rightful place alongside traditional rack-mounted and stand-alone servers as a de facto standard for the data center – but those servers might not be called blades. Vendors of compact, 1U servers are taking a page from the blade server playbook, evolving toward more modular, ultracompact designs that are beginning to blur the differences between the two architectures.

Rackable Systems Inc.'s Scale Out Series servers are a prime example. In a traditional blade server, a chassis accepts vertically mounted server cards and provides shared power, cooling and connectivity by way of a common backplane. The entire chassis unit, typically 6U or 7U high, slides into a standard server rack. The Milpitas, Calif.-based vendor's "blade server" system essentially uses an entire rack as its chassis. Like blades, its modular servers plug into a common backplane that eliminates cable clutter. But while Rackable's servers can share power and cooling, they don't share storage or network interconnects, as products like IBM's BladeCenter do. "We consider what Rackable offers not to be a blade," says Gartner analyst Jane Wright. "They're kind of a hybrid."

Rackable's smallest servers are 1U high, but it's able to achieve densities in the same range as blade servers – up to 92 servers per rack – through innovative design. It mounts servers sideways within the rack instead of vertically, and each server takes up only half of the cabinet depth so that servers can be arranged back to back within the enclosure. Since the cabinet has two faces, there is no hot aisle. Instead, it takes in fresh air from both faces of the rack while a ventilation chimney in the center of the cabinet exhausts heated air to keep the servers cool.

"Rackable can get many more traditional servers into a rack than the major vendors can – and can cool them," Wright says. But the competition isn't standing still. "Plenty of vendors are working on ways to redesign traditional servers," she says.

– Robert L. Mitchell

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Python

QUICK STUDY

DEFINITION

Python is an object-oriented, open-source programming language often used for rapid application development. Python's simple syntax emphasizes readability, reducing the cost of program maintenance, while its large library of functions and calls encourages reuse and extensibility.

BY RUSSELL KAY

AMONG THE LANGUAGES favored by Web developers and innovators, particularly those in the open-source community, three of the most popular are the alliterative Pearl, PHP and Python.

Previous QuickStudies in *Computerworld* have covered Perl [QuickLink 24466] and PHP [QuickLink 24784], but thus far we've neglected Python, which is emerging as a powerful alternative to the more traditional choices.

Python is attractive because of its ease of use; its high level of abstraction from the hardware; its extensive support for housekeeping activities such as I/O, memory management, data typing and variable binding; and, perhaps most important, the fact that programmers can be highly productive with the language.

Python was created in the late 1980s by Dutch programmer Guido van Rossum and was named after the BBC television comedy series *Monty Python's Flying Circus*.

You can consider Python either a scripting language (see box below) or a "regular" programming language. It offers an interactive mode for quick development and testing, as well as a noninteractive mode for ease of reuse.

In fact, Python doesn't actually contain anything new — every feature has been taken from some other language. These practical capabilities are wrapped up in a simple package that's available for anyone to download and use without restriction; not even the GNU Public License applies.

Like Java, Python has a small core and a large, extensible library of functions and procedures. Thus, most of what a programmer is likely to need already exists in written, tested form and can be used with simple library calls glued together with a small amount of new code.

One measure of Python's programmer-friendliness is its reliance on a simple indentation hierarchy for grouping sections of code, which eliminates the need to match Begin/End statements or to count parentheses, brackets or curly braces.

Even so, Python is a general-purpose programming language that offers far more structure and support for large programs than simple shell scripts and much more error checking than lower-level languages such as C.

Python is object-oriented with built-in, high-level data types, including flexible arrays and dictionaries. It can be applied to much larger problems than languages such as Awk or even Perl can, yet it remains as easy to use as those languages.

Python's Appeal

In a 2000 interview with *Linux Journal* (*www.linuxjournal.com/article/3882*), programmer, author and open-source advocate Eric S. Raymond recounted his initial experience with Python:

"A couple of hours into the project, I noticed (allowing for pauses needed to look up new features in *Programming Python*) I was generating *working* code nearly as fast as I could type. . . . This was my first clue that, in Python, I was actually dealing with an exceptionally good design. Most languages have so much friction and awkwardness built into their design that you learn most of their feature set long before your misstep rate drops anywhere near zero. Python was the first general-purpose language I'd ever used that reversed this process."

The power of Python can also be suggested by some of its users. According to Peter Norvig, director of search quality at Google Inc. in Mountain View, Calif., "Python has been an important part of Google since the beginning and remains so as the system grows and evolves."

You've also seen Python in action at your local cinema. "Python plays a key role in our production pipeline," says Tommy Burnette, a senior technical director at special-effects studio Industrial Light & Magic (ILM) in San Rafael, Calif. "Without Python, a project the size of *Star Wars Episode II* would have been very difficult to pull off. From crowd rendering to batch processing to compositing, Python binds all things together."

Burnette's sentiments are echoed by Philip Peterson, ILM's principal engineer for research and development. "Python is everywhere at ILM," he says. "It's used to extend the capabilities of our applications, as well as providing the glue between them. Every [computer-generated] image we create has involved Python somewhere in the process."

53863

Kay is a Computerworld *contributing writer in Worcester, Mass. You can reach him at russkay@charter.net.*

FOLLOW THE SCRIPT

Python, like many of its contemporaries, is what's called a scripting language. This means that it's designed to facilitate the quick and easy gluing together of segments of code from other sources. Other scripting languages in wide use today include Perl, Tcl, Rexx, JavaScript, VBScript and a variety of Unix shells.

While all these languages are capable of creating many types of applications and systems from scratch, scripting languages are especially good at communicating with program components that have been written in other languages. Programs (also called scripts) are usually stored only as plain ASCII text and interpreted at runtime, though some languages, including Perl, compile a script each time they're invoked. (For more on the difference between compilers and interpreters, see QuickLink a5740.)

In addition, scripting languages are often designed for interactive use and feature many commands that can be executed individually. In some scripting languages, such as sh, the classic Unix shell, most operations are actually programs in their own right. The use of such high-level commands considerably simplifies the process of writing code.

In the early days of computers, when machines had limited storage and memory, programs had to be supercompact and ultraefficient. Small and quick meant everything, while simplicity and elegance (or even the understandability of code) didn't count. As hardware has become vastly more powerful and software needs have become far more complex, however, users have had to expend much more effort on refining the development process – especially prototyping and rapid development models – at the expense of pure code efficiency.

In today's environment, scripting languages make good sense. Developers can take for granted important programming features such as automatic memory management and bounds checking. When using a nonscripting language on the other hand, programmers have to expend time and effort – and write much more code – to manage memory and variables and to create needed data structures. Besides allowing faster and more-productive programming, script files are usually much smaller than equivalent program files written in C.

Today, many enterprise-class development projects use both a scripting language and a lower-level programming language in tandem. Each language helps to solve specific problems for which it's better suited.

– Russell Kay

PYTHON GETS A BOOST

Zope, a Web application server and portal tool kit written in Python, has spurred interest in the programming language.

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The Cost of Securing The People's Privacy

As a bill on consumer privacy heads to the legislature, our security manager has to do a fiscal impact analysis. By C.J. Kelly

SECURITY MANAGER'S JOURNAL

I WAS RECENTLY ASKED to analyze a legislative bill to determine what fiscal impact it could have on our agency. In this state, it is a requirement that before a proposed bill can go before the legislature for approval, it must be distributed to all of the state agencies so that they can analyze the fiscal impact. The bill in question would force the agencies to take additional security measures, and the legislature needs to know how much they'd likely cost.

The aim of this particular bill is to protect consumer privacy, something that seems to be getting attention in a lot of states.

California's SB 1386, a similar law that passed a few years ago, states, "Any agency that owns or licenses computerized data that includes personal information shall disclose any breach of the security of the system following discovery or notification of the breach in the security of the data to any resident of California whose unencrypted personal information was, or is reasonably believed to have been, acquired by an unauthorized person."

Personal information is defined as a person's first name or initial and last name combined with his Social Security number, driver's license number, or credit card or account information, including the PIN or password. Publicly available information like an address or anything that's in the public record, such as real estate transactions, isn't considered personal information.

The statute allows for written, electronic or substitute notice. Substitute notice can be provided via mass e-mails or public forums such as newspapers and broadcast media.

If you or I hear on the radio that our state's Department of Motor Vehicles' security was breached and the personal information of everyone in the state was compromised, what is our recourse?

The California law states, "Any customer injured by a violation of this title may institute a civil action to recover damages." But many of us do nothing when we hear about such things, other than shake our heads. Until . . .

Here's a nightmare scenario: Two years later, you are buying a home. You have already sold your old house and moved into temporary housing, since you have every reason to believe that the purchase of the new home will go through without a hitch. In the middle of the back-and-forth with the loan officer over interest rates, he calls and tells you that your loan has been turned down because of an overwhelming number of extremely negative items on your credit report. You're stunned. You may not have perfect credit, but it certainly qualifies for the best interest rates. The loan officer provides copies of your credit report to you, and you see that it's filled with items that you don't recognize, including locations you have never lived in or visited. Your credit score is in the proverbial toilet. How could this have happened? Without your knowledge, ever since that DMV security breach, someone else has been using your Social Security number and identity and has basically ruined your life.

> **I am concerned about traffic that traverses the statewide network.**

Costs, Layer by Layer

Back to the bill that was sitting on my desk. Our agency is responsible for providing a critical service to state residents, and our databases contain a lot of their personal information. The databases sit on local file servers, on data center file servers in a separate location and in each branch office throughout the state, as well as on the local hard drives of our employees. The data in these databases isn't encrypted. Furthermore, the information is shared with other agencies via file transfer protocol (FTP), e-mail and the Web. The question I have is, What would it cost our agency to put security controls in place that would protect this vital information?

If I start at the bottom and work my way up through the Open Systems Interconnection layers, I might be able to take a swipe at the cost for implementing controls.

At Layer 1, I am concerned about network access, and that includes physical access. For example, there is roof access to our main building that would allow a maintenance person or anyone else to enter the crawl space above our data closets. The ceiling tiles can be easily removed, and access to our routers, switches and servers would be readily gained. However, since the Health Insurance Portability and Accountability Act requires that physical security concerns be remedied, corrective measures are under way.

At Layer 2, I am concerned about traffic that traverses the statewide network. I consider the statewide network to be "untrusted," and since I have no knowledge of the endpoints of that network or the security controls within it, I have to treat it the same way I would any other Internet service provider. This calls for a firewall capable of 3DES- or AES-level encryption with virtual private network capability for each agency office. This will require more bandwidth than we currently have.

Layer 3 is about host-to-host connectivity via TCP/IP, and I don't think the legislators would understand this level of discussion, so I'm not going to address it on this round of the analysis.

Layer 4 is the biggest concern. We need to replace our FTP sites with Secure FTP, requiring the highest level of encryption possible. Secure Sockets Layer needs to be instituted on our Web servers. We need to encrypt our internal e-mail. Every database that contains personal information must also be encrypted.

My fiscal impact analysis showed that we would need to spend several hundred thousand dollars and hire additional staffers. It created quite a buzz among the other agencies, which wanted to know how we came up with the figures. Hopefully, our analysis will spur those responsible for the statewide network to implement controls that will benefit all agencies. ◗

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com, or join the discussion in our forum: **QuickLink a1590**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

Yellow Light for Online Banking

New research from TowerGroup has found that advances in online fraud pose a significant and fast-growing threat to consumer confidence in online banking. New approaches go beyond e-mail-based phishing scams and include the use of spyware, remote administration tools and various methods of hijacking browsers. In the face of this evolution, the practice of requiring a username and password as the sole means of online customer authentication is becoming rapidly outdated, the Needham, Mass.-based research firm states. In its report, TowerGroup advocates two-factor authentication as a vast improvement in security.

Broadcom Adds Hardware Security

Broadcom Corp.'s newest NetXtreme Gigabit Ethernet controllers will include integrated Trusted Platform Module 1.2 functionality. TPM is a security standard created by the Trusted Computing Group for a hardware-based secure computing environment. Broadcom noted that the integration of TPM on its NetXtreme network interface controllers means a higher level of PC security can be placed on motherboards at negligible incremental costs.

New IPS Line

NitroSecurity in Portsmouth, N.H., will announce its newest intrusion-prevention system product line tomorrow. The NitroSecurity IPS 6.0 suite includes an event management tool designed to identify and neutralize internal and external attacks in real time. In addition, it draws from the industry's largest signature library and powerful anomaly detection methods, allowing for seamless integration with routers and switches located across enterprise networks of all sizes.

BRIEFS

Tacit Software Upgrades ActiveNet

■ Tacit Software Inc. in Palo Alto, Calif., has released Version 3 of its collaboration software. ActiveNet 3 can be integrated in business processes, including procurement, research and development, and business development, using wizards that help users connect with others while ensuring that business rules remain intact, the vendor said. An initial deployment starts at $250,000.

ClearStory Unveils Latest Media Server

■ ClearStory Systems in Westboro, Mass., has unveiled Radiant Enterprise Media Server 2.0. The product was designed to allow users to organize and manage file types, including complex video, graphics, compound documents and other rich media, according to the company. EMS 2.0 starts at $125,000.

Barracuda Spyware Firewall Released

■ Barracuda Networks Inc. has launched Barracuda Spyware Firewall, which offers antispyware and Web filtering in one gateway appliance, the Cupertino, Calif.-based company said. Available June 1, the devices range from $1,999 to $5,999, with no per-user fees. They support up to 1,000 users and up to 500 simultaneous Internet connections.

Microsoft Previews SQL Server 2005

■ Microsoft Corp. last month announced the availability of its SQL Server 2005 April Community Technology Preview. The company said that future iterations of the database will be offered exclusively in the CTP format and that the current release has all the features that will be present in the next-generation SQL Server 2005. It is also compatible with Visual Studio 2005 Beta 2.

MARK WILLOUGHBY

The Future Is More Than Moore's Was

MOORE'S LAW IS DEAD. Long live Moore's Law, which for most of us was the opening salvo in the intellectual exercise of relating society to technology.

Intel founder Gordon Moore's observation, made 40 years ago last month in *Electronics* magazine, originally dealt only with the density of semiconductors: "The complexity for minimum component costs has increased at a rate of roughly a factor of two per year . . . this rate can be expected to continue, if not to increase."

MARK WILLOUGHBY, CISSP, is a 20-year IT industry veteran and journalist. He can be reached at markw@messaginggroup.com.

Later, the remark was tweaked and elevated to the status of a "law" as it gained a cult following among technologists trying to understand the impact of technology. Like an overworked protocol, it was extended to areas unimagined by its creator — predicting the economics of technology and the next big thing in the Information Age.

History may recognize Moore's Law as the first crack at an algorithm to describe the accelerating progress of technology. Pre-Moore predictions were mainly the domain of futurists like H.G. Wells, who described technology as progressing on a linear scale. Wells and other futurists described a postindustrial world of fancier machines, exotic airships, death rays and magical communications replacing steam engines.

Gauging the future in Wells' turn-of-the-century time was largely science fiction. The rate of technology change was quickening in late Victorian times, yet it was slow by today's standards and could hardly be accurately observed, much less modeled or measured.

Moore brought the future into clearer focus with a useful, if misunderstood and somewhat erratic, lens for measuring technology growing exponentially.

Now, after 40 years, the future of Moore's Law ain't what it used to be. Moore's Law self-destructs when the economics of digital electronics reaches the point of declining returns.

For a fresh look at the future, meet Ray Kurzweil and the Law of Accelerating Returns. Kurzweil, best known for the digital keyboards (more properly called synthesizers) that bear his name, is one of the most amazing figures of the current epoch. His Law of Accelerating Returns, unveiled in a 2001 essay [QuickLink a5780], measures the computational power of machines back to the time of Wells. Importantly, it frees the rate of technology change from any specific implementation, like semiconductors and transistors.

Through five technology paradigms, from electromechanical, through vacuum tubes to integrated circuits, Kurzweil finds the rate of technological change to be even more dramatic than Moore forecast. Computational power doubled every two years, Kurzweil found, from the late Steam Age through the Electromechanical Age, until 30 years ago. Then, with the dawn of the Digital Age, computational power began to double yearly.

"Technological change is exponential, contrary to the common-sense 'intuitive linear' view," Kurzweil wrote. "We won't experience 100 years of progress in the 21st century — it will be more like 20,000 years of progress (at today's rate). . . . Within a few decades, machine intelligence will surpass human intelligence."

In the second decade of the 21st century, we will enter what Kurzweil labels the sixth paradigm of computing, which will harness three dimensions of computing using the human brain as a model. Kurzweil sees the constraints posed by the Law of Declining Returns being brushed aside by stages of evolution that provide more-powerful tools for each succeeding generation.

"The bulk of our experiences will shift from real reality to virtual reality," he wrote. "Most of the intelligence of our civilization will ultimately be nonbiological, which by the end of this century will be trillions of trillions of times more powerful than human intelligence."

This future, according to Kurzweil and others, leads to the Singularity, where societal, scientific and economic change is so fast we can't even imagine what will happen from our present perspective. According to Kurzweil, the Singularity represents a "rupture in the fabric of human history," the impact of which is impossible to know but will doubtless be profound for both man and machine.

Kurzweil didn't invent the Singularity, only a model for measuring our progress toward it. Singularity is generally credited to mathematician and author Vernor Vinge, who began expounding on the topic in the 1980s. He explained it in detail in his 1993 essay "Technological Singularity" [QuickLink a5790].

And just so you don't get too comfortable, beyond the Singularity could lie the Gray Goo, posited by Eric Dexler of the Foresight Institute, a nanotechnology think tank. The Gray Goo is a return to the seminal pool, this one formed by nanomachines that destroy mankind.

Get your popcorn and settle in for this accelerated version of reality. It's just starting, and the future is more than it once was. **54041**

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MANAGEMENT

05.02.05

Think Tank
Analysts say it isn't easy switching from the cost-cutting mind-set to more innovative IT work. Meanwhile, a new book says routine programming work is out and inventiveness is in. **Page 36**

Career Watch
Unhappy CIOs seek greener pastures; IBM deploys just-in-time employees; workers weigh their benefits; and outsourcing continues to rise. **Page 40**

OPINION

To Motivate, Don't Demotivate
Try as you might to motivate your IT team, you may or may not succeed. But Paul Glen says there are surefire ways to *demotivate* them. Here's what not to do. **Page 41**

The vendor collaboration was the "coolest thing I've been involved in," says Xcel Energy CIO RAY GOGEL.

PATRICIA BARRY LEVY

Power Partners

PREMIER 100 [SPOTLIGHT]

Xcel Energy's six-vendor strategic advisory board takes collaboration to a new level.

By Thomas Hoffman

LOTS OF CIOs talk about "partnering" with technology vendors. But Xcel Energy Inc. CIO Ray Gogel has given the term new meaning.

Late in 2001, Minneapolis-based Xcel began evaluating how it could apply IT to help rearchitect business operations. But an off-site meeting with the power company's six biggest technology vendors in Denver three days before Christmas 2003 set the stage for its dramatic transformation.

The previous August, Gogel and his top lieutenants had held preliminary discussions with senior executives and product-design managers from six companies, including IBM, Mercury Interactive Corp. and Itron Inc. They discussed how to help Xcel apply technology to support a set of business improvement initiatives as part of an effort known internally as the "utility of the future."

The vendors came back to Gogel and his team two months later with 49 discrete project proposals, nearly all of which were focused on landing each of the vendors a particular project.

It was precisely what Gogel didn't want to hear. "I told them they weren't getting the message," says Gogel, a *Computerworld* 2005 Premier 100 IT Leader honoree. "We wanted them to put aside any concerns about intellectual property and nondisclosure agree-

ments and brainstorm with us on ideas to help change the business at a higher, more strategic level."

When the six representatives met in December, there were no discussions about intellectual property (IP) and nondisclosure agreements. Instead, the vendors talked about projects they could work on together to help Xcel improve its field service and internal business operations.

"It was the coolest thing I've been involved in ever since I've been in business," says Gogel, who runs the business systems division from Denver. "It's the anti-Nicholas Carr thing: Let's see what we can do with IT to help change the business." (See related story, QuickLink 37990.)

"It's almost like we had opened up these new channels at a development and IP level," adds Michael Carlson, vice president of business transformation and customer value at Xcel.

Getting to Work

Once the direction was set, 45 people from Xcel and the six vendors worked together on design development for nine business improvement projects from February to May 2004. The seven Xcel representatives in that group included one IT executive, a few business analysts and a couple of field operations managers, says Carlson. The projects cut across three areas: field operations automation, customer support and asset optimization.

Getting vendors to work closely together on projects is always tough, but Xcel's IT outsourcing relationship with IBM helped, Gogel says.

Gogel, who worked at IBM before joining Xcel in 2000, says large outsourcing contracts tend to focus on cost containment. "They are usually overlaid with implications of transformation, but few companies actually get there," he says.

But Xcel's relationship with IBM has taken a different path and is more focused on achieving business results, says Gogel. The second generation of the Xcel-IBM contract, which was revised in 1999, focuses on optimizing synergy savings from mergers and providing business transformation services to help Xcel's business units develop their business-IT plans, he says.

So when Xcel tapped IBM to join other vendors to form the strategic advisory board, it didn't have to amend its contract. "However, we did craft a preamble, or 'social contract,' to the master agreement, which stated explicitly how we would work together to drive transformation," says Gogel.

Another largely unanticipated benefit of working with IBM on the strategic advisory board was that the other partners were able to leapfrog the often slow process of establishing business relations with IBM and start at the top with the very senior IBM executives that sat on the board, says Gogel.

IBM has also shifted some sales, general and administrative expense funds that were earmarked to support Xcel's IT operations into software development investments, says Dave Marley, a managing director at IBM in Denver who sits on Xcel's strategic advisory board. Marley is awed by what the collaboration has achieved. "I've been around this business for 20-plus years, and I've never seen anything like it," he says.

Breaking the IP Mind-set

Another key element in making the strategic advisory board work was Xcel's decision upfront not to try to own any of the IP that came out of its development efforts with the vendors. "The companies that try to facilitate these types of arrangements typically want to own the IP," says Gogel. "Instead, we're trying to take advantage of being the first [customer] to do it and leave the IP to the vendors."

Xcel's decision to allow its vendor partners to own the IP that comes out of their joint business-IT projects "was visionary on their part," says Marley, because it gave the vendors a huge incentive to invest in the projects. "Where else are you going to find a company — much less a utility — that gets $10 million in [development and labor] investments from its business partners?"

"There aren't a lot of Ray Gogels in the world who understand partners and business so well," says John Woolard, vice president of strategy and business development at Spokane, Wash.-based Itron.

Woolard, who also sits on Xcel's strategic advisory board, says each vendor in the group has learned a great deal about how to partner better. "It's very difficult to partner with just one company, and to do it with six is just phenomenal," he says.

Since systems built for Xcel might eventually be sold to other energy customers, it wouldn't be unreasonable to expect a lot of haggling among members of the strategic advisory board over legal issues such as IP and revenue sharing. But Gogel, Carlson, Marley and Woolard say that hasn't been the case.

"The legal agreements took longer to iron out than any of us thought they would," says Woolard. "But it was never contentious. It was more about trying to explain to the lawyers what we were trying to accomplish from a business standpoint."

The resourcefulness of the strategic advisory board has made believers out of Xcel's business executives. Tim Taylor, vice president of field operations at Xcel, who is responsible for electric and gas distribution, says the group's work has already helped improve the company's business operations. "We've had an incredible improvement in auditability — knowing when we received a trouble job, when we were on-site for a trouble job, when it was completed," he says.

Taylor has sat in on some of the strategic advisory board sessions and says he has found them fascinating. "Everybody put some skin in the game," he says. "They didn't have boundaries around their own products."

The accomplishments of the board "have exceeded my expectations," says Richard C. Kelly, Xcel's president and chief operating officer. "For this first year, I thought it would be focused on procedures and who does what. But I've been totally wrong. They rolled up their sleeves right away."

Zarko Sumic, an energy industry analyst at Gartner Inc., says he's aware of a few comparable initiatives where utilities are tapping vendors to help them with business transformation efforts. Among them is a consortium of energy companies such as BC Hydro and Wisconsin Power and Light Co. that have bonded together to work with vendors on developing next-generation power-distribution technologies.

"The difference here is that Xcel Energy is taking more of an enterprise approach and they're strongly encouraging their solutions providers to see how they could work together to deliver that vision," says Sumic.

That's no easy task, he adds. "Vendors are like small kids — they don't know how to share."

Sumic says that Gogel has been able to get the six vendors on Xcel's strategic advisory board to work together in part by luring them with promises of potential revenue from products that are developed by the group.

Gogel himself credits the board members for the success of the board, and he explains it this way: "They saw something coming out of trusting each other." **53558**

XCEL ENERGY INC.

Headquarters: Minneapolis

Business: Fourth-largest combination electricity and natural-gas energy company in the U.S.

Revenue: $7.9 billion

Net income: $622 million

Employees: 11,048

Customers: 3.3 million (electric); 1.8 million (natural gas)

Members of Xcel Energy's strategic advisory board:

- IBM
- Itron Inc.
- Indus International Inc.
- Mercury Interactive Corp.
- SPL WorldGroup Inc.
- Insight Venture Partners

Business Benefits

The strategic advisory board collaboration is already bringing business benefits to Xcel Energy. For example, one of the projects provides Xcel's field service workers with mobile data terminals to quickly access customer information and infrastructure drawings for commercial clients. It was piloted from June to September last year and has since been put into production.

The mobile devices have delivered several additional benefits, says Michael Carlson, vice president of business transformation and customer value at Xcel.

For instance, 300 of Xcel's field service crews are using a mobile dispatch system to estimate the amount of "idle time," or time between service calls, that they have on a given workday. Dispatchers can use that information, along with where the work crews are at any time and the type of equipment they have onboard their trucks, to coordinate additional service calls for them.

– Thomas Hoffman

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[1]Gartner Dataquest, *Teleworking: The Quiet Revolution*, September 2004. [2]Winner, Miercom "Best-in-Test in Large Enterprise IP PBX" competition. © 2005, Avaya Inc. All Rights Reserved. Avaya, the Avaya Logo, and all trademarks identified by ® or ™ are trademarks of Avaya Inc. and may be registered in certain jurisdictions. All other trademarks are the property of their respective owners.

ThinkTank

BRAIN FOOD FOR IT EXECUTIVES

Changing Gears From Frugality To Innovation

A GENERATION OF IT LEADERS has focused on reducing costs, outsourcing and calculating investment metrics. With an uptick in IT budgets, they're supposed to be able to move from the cost-cutting mind-set to more innovative and strategic IT work, but Marc Cecere, an analyst at Forrester Research Inc., says it's not so easy to change gears.

According to Mark Livingston, a vice president at consulting firm A.T. Kearney Inc. in Chicago, "The reality is most IT departments can't effectively explore innovative uses of technology because they are stuck in the daily operational grind."

An A.T. Kearney study found that only

GETTY IMAGES

20% of companies' IT spending is allocated for IT innovation – a 30% decrease from 2002. A similar study by Forrester puts the innovation number at 33%, which still means that 67% of the IT budget is tied to ongoing operations and maintenance. Moreover, regulatory compliance and security spending are cutting into the money available for innovation. A.T. Kearney is urging IT leaders to get even stingier with operational IT to free up funds for strategic initiatives.

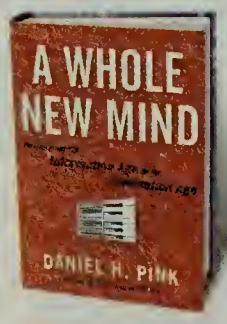
Helen Pukszta, a senior consultant at Cutter Consortium in Arlington, Mass., has another idea. She says IT departments need a "manager of IT business innovation," who would research, analyze and propose new IT applications that would give the company a competitive advantage. That way, the IT steering committee looks at a broader set of IT investment choices than what's already in the project portfolio.

– Mitch Betts

Best Bits

The most useful parts of recent business and IT management books

THE BOOK: *A Whole New Mind: Moving From the Information Age to the Conceptual Age*, by Daniel H. Pink (Riverhead Books, 2005).



Pink, a bestselling author who has become the darling of the blogosphere, argues in this book that the era of "left brain" dominance, with its emphasis on logical, linear, computerlike thinking, is on the way out and that we're entering the Conceptual Age, when "right brain" qualities such as inventiveness and design will predominate. What does that mean for IT people? Programmers are out (as in outsourced); innovators and artists are in. Routine work is either done through automation or in Asia.

"The outsourcing of routine software work is putting a new premium on software engineers with high-concept abilities," Pink writes. "After all, before the Indian programmers have something to fabricate, maintain, test or upgrade, that something first must be imagined or invented."

And these creations must then be explained and tailored to customers and users, Pink adds, which requires "aptitudes that can't be reduced to a set of rules on a spec sheet – ingenuity, personal rapport and gut instinct."

– Mitch Betts

Research Roundup

■ **Retail Web site designers** should worry less about alienating dial-up users and use more of the rich media features that appeal to broadband users, says a study by Nielsen/NetRatings, a service of NetRatings Inc. in New York. Why? The study says broadband users make 69% of online retail purchases, and they spend more money than dial-up users do.

■ **About 60% of consumers are concerned about identity theft,** and 6% have switched banks because of the problem, according to a January survey of 1,000 U.S. consumers by IDC's Financial Insights unit.

■ **The Goldman Sachs Group Inc.** in New York asked 100 corporate IT managers in March for their views of Sun Microsystems Inc. One-third of the respondents said "it's already too late" for the vendor, while 27% said Sun is "standing still." On the positive side, 13% said Sun is "moving in the right direction," and 3% said, "Sun is back." **53831**

Business Priorities

Are you listening to what business executives want out of IT? Here are their most urgent requests:

1. **Have applications better fit our business processes.**
2. **Improve access to relevant information.**
3. **Provide better systems for communication and collaboration.**

BASE: 200 U.S. BUSINESS EXECUTIVES; MULTIPLE RESPONSES ALLOWED
SOURCE: FRANK GENS, IDC, FRAMINGHAM, MASS., MARCH 2005

GOT ANY BRIGHT IDEAS? *Send them to pitches@computerworld.com.*

The IT Economy

■ **Security software remains the highest spending priority among IT managers,** according to a survey of 100 IT managers by Goldman Sachs. Business intelligence software is also high on IT shopping lists, with 59% of the respondents saying they plan to purchase BI software in the next 12 months.

■ **President Bush proposed a 7.1% increase in the fiscal 2006 federal IT budget.** But vendors hoping to get rich quick in the government market need to realize that federal IT spending is very uneven, says Gene Leganza, an analyst at Forrester Research. The U.S. Department of Defense and the U.S. Department of Homeland Security are in for big IT budget increases, but many other agencies have tight discretionary budgets. Those budgets are getting even tighter, Leganza says.

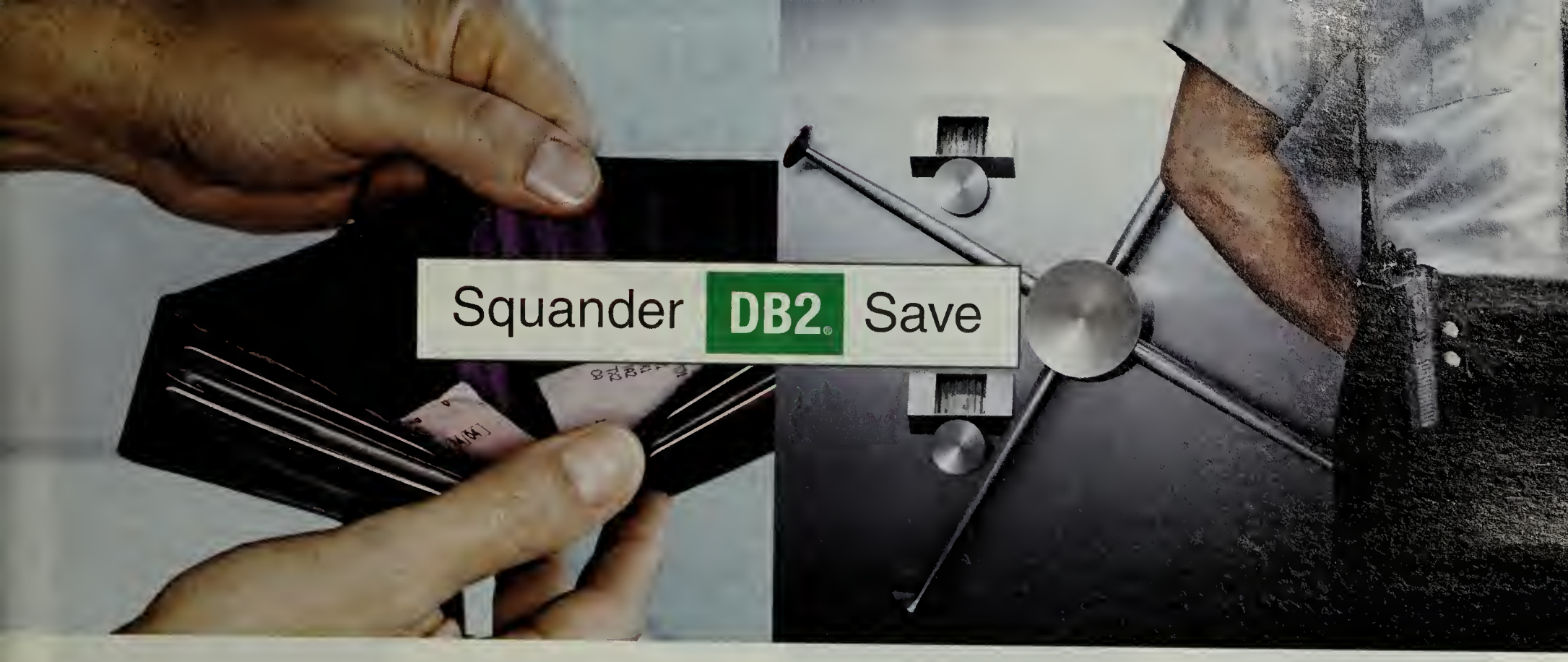
Buying Intentions

■ **IDC economic research** continues to offer a positive, but not spectacular, picture of growth in IT spending in the U.S. over the next 12 months.

"While buyer optimism has dropped a hair, the macroeconomic picture has picked up, mostly as a result of improving revenue forecasts for vendors," IDC says.

The buyer intent index is based on monthly surveys of 400 to 500 U.S. CIOs and business executives, who are asked about their IT spending expectations for the next 12 months. Results are weighted to be representative of the U.S. market. An index of 1,000 means zero growth. Caveat: Buying intentions don't always lead to real spending.

SOURCE: IDC'S FUTURESCAN, FRAMINGHAM, MASS., APRIL 2005



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The Transaction Processing Performance Council results show that DB2 and eServer™ p5-595 are more than twice as scalable as Oracle Real Application Clusters, making them the overwhelming performance and scalability leader for TPC-C.[2] And an ITG study showed overall costs for Oracle Database up to four times higher than DB2.[3]

No wonder DB2 is regarded as the leading database built on and optimized for Linux®, UNIX® and Windows®. Like other IBM database engine products such as Informix® and Cloudscape™, DB2 is part of an innovative family of information management products that integrates and can actually add insight to your data.

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One more thing: Oracle desupported Oracle Database 8i last year, meaning potential headaches, higher cost or a complete migration to current versions of Oracle. Fortunately, IBM offers ongoing, around-the-clock service and support for DB2.

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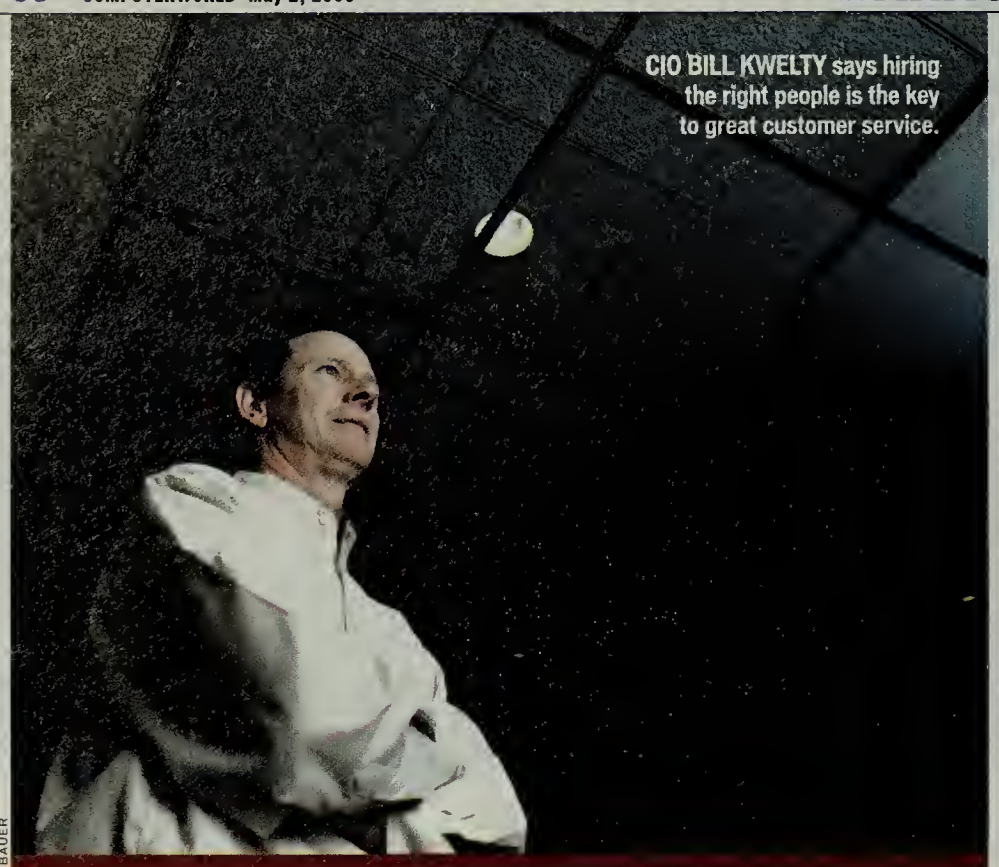

CIO BILL KWELTY says hiring the right people is the key to great customer service.

SCOTT NIBAUER

CUSTOMER-CENTRIC IT:

A Road Map

HERE'S HOW AUTOMOTIVE RESOURCES INTERNATIONAL HARD-WIRED CUSTOMER SERVICE INTO THE IT GROUP. BY BILL KWELTY

IT MENTOR

JUST ABOUT EVERY COMPANY and IT group today claims to be "customer-centric," but at my company, it's more than a slogan. In my 38 years in the IT profession, I've learned that working closely with our external customers to develop mutually beneficial systems and information services is a strategic competency.

Back in 1980, Automotive Resources International, which specializes in fleet management, launched its first online, real-time system to allow customers to have direct access to their fleet management data. This was revolutionary in those days.

The approach we used to get started back then was very basic, but it would still apply today. We identified the three top reasons customers would contact the customer service area. Armed with that information, we designed an online screen containing the three menu selections to address each requirement. This created a win-win solution. Customers embraced the idea of expediting their own changes on our online system, and we gained operational efficiencies.

This success instilled the customer-centric philosophy that has carried through to today. Once our IT people began working with customers and experiencing the rewards of meeting and exceeding their expectations, there was no turning back. We had created a monster — albeit a friendly one — and the number of our online customers has grown from the initial three to nearly 10,000 today.

PEOPLE

Creating a customer-centric IT group begins with hiring the right people. But technical skills alone won't get the job done. We look for people who not only have exceptional technical talents but also are customer-oriented.

If our systems people are going to gain the trust of our customers, they need to fully understand customer issues and priorities and be able to clearly communicate a realistic time frame for delivering products. This means working around the clock if necessary to meet deadlines — nothing new for IT people. But what is new in a customer-centric organization is the absolute requirement to maintain customer service as the No. 1 priority.

STRUCTURE

A new organizational structure enabled us to maintain that priority. This came about in 1991 when we were in the middle of an acquisition of another company of the same size. It's easy to lose focus on customer service during an acquisition, and we were no different. But when we recognized this danger, we created a group whose sole charter was to maintain the IT service needs of our external customers (see box). It took only a few people with the right focus to turn the tide away from missing deadlines back to being on schedule.

A more current source of concern affecting all of us are the Sarbanes-Oxley regulations. It's obviously one of those important projects that could take IT's eye off of the ball. As critical as it is to comply, we can't sacrifice customer service to get it done, and our structure ensures that we won't.

ATTITUDE

The challenge is to create an environment that encourages a can-do attitude. The mentality that looks beyond obstacles and finds solutions should be recognized and rewarded. Not all employees are superstars, but everyone can bring his own game up a notch.

If your senior management views IT as strictly overhead and doesn't embrace technology as a strategic selling tool, it won't be. You may never know how many lost opportunities result.

In contrast, our conviction that everyone performs a critical role in delivering great service starts at the very top of the organization and runs all the way through to each employee. "The customer is king" is the mantra at the heart of a customer-centric organization. It's a self-fulfilling prophecy.

METRICS

All your efforts to become customer-centric won't matter much if you can't accurately measure your results. Benchmarking yourself against your competition or related industries is critical to improving. It's not always easy to get an independent evaluation, but there are several ways to get quantifiable measurements. The simplest way is to ask your customers.

Moreover, there may be companies that already collect data on your field. We were fortunate to have access to an independent evaluation of the entire fleet-management industry. In the IT area, the crucial metrics are overall satisfaction with the Web site, variety and quality of information, ease of navigation and ability to customize the site.

We also use metrics from ARI's Partners in Excellence (PIE) program, which includes customer-driven measures such as average speed of answer, registration renewal accuracy, order accuracy and speed, and customer billing response. ARI systems are designed to track and report on PIE's 50 customer goals.

The effectiveness of the program was verified when the most recent National Association of Fleet Administrators' Foundation Survey of fleet managers gave ARI the highest customer-satisfaction score of any major competitor.

Of course, the bottom-line metrics are how many new customers have been signed and how many customers we've retained. While we can attract them by using technology, we will lose them if we don't measure up.

Good luck embracing this vision of becoming a customer-centric enterprise. **53784**

Bill Kwelty is CIO at Automotive Resources International in Mt. Laurel, N.J. Contact him at BKwelty@arifleet.com.

THE VEHICLE

All priorities are not created equal. To ensure that customer priorities don't get lost in the shuffle, we have organized our technology efforts into three groups:

- **THE IT GROUP** is responsible for the infrastructure, which includes security, operations, desktops and telephones.
- **THE MIS GROUP** supports all of our internal business systems.
- **THE CUSTOMER INFORMATION SERVICES (CIS) GROUP** provides technology and system support to external customers. This includes Web site enhancements, support for business intelligence and reporting needs, EDI interfaces, data warehousing, global services, help desk support, training, customized software, demonstrations/presentations and providing a clear technology vision to keep customers abreast of our plans for the future. To stay on top of technology, our CIS people actively participate at industry-related conventions and ARI-sponsored seminars.

This structure requires the groups to work together and share the same vision, and CIS uses resources from the other two IT groups to fulfill requirements.

– Bill Kwelty

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Nominations are welcomed from IT Users/Implementers; Systems Integrators/Consultants; IT vendors on behalf of customers, or, their own In-House Deployment; and PR firms on behalf of clients. Multiple submissions of case studies describing different deployments per company/organization will be considered.

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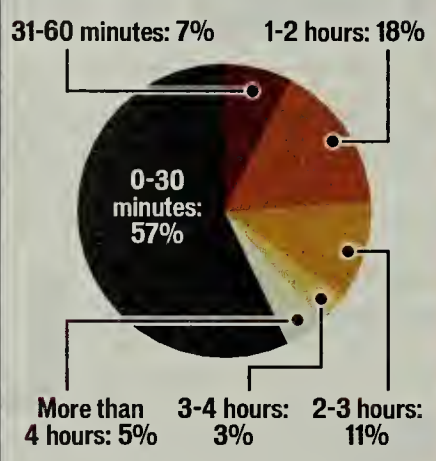
Career Watch

No Time to Choose

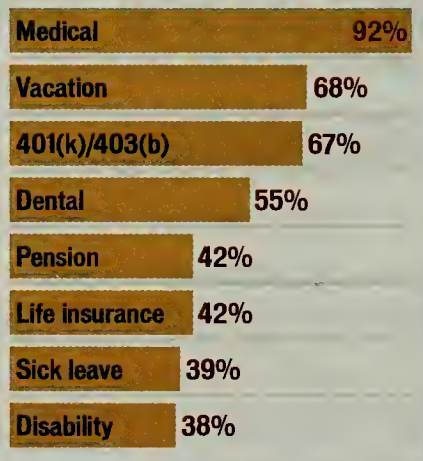
The median time that employees spend thinking about and making benefits decisions is 30 minutes.



Note: Total equals 101% because of rounding.

The Best Bennies

Full-time employees said that the following benefits are most important to them.



Note: Multiple responses allowed.

SOURCE: METLIFE INC. NOVEMBER 2004 STUDY OF EMPLOYEE BENEFITS TRENDS IN WHICH 903 FULL-TIME EMPLOYEES AND 1,542 ADULT CONSUMERS WERE SURVEYED.

Dave Opton

Q&A

TITLE: CEO

ORGANIZATION: ExecuNet, Norwalk, Conn.

A recent survey conducted by ExecuNet, an executive job search and recruiting network, reveals that a majority of executives are unhappy with their current positions and that many are planning to seek greener pastures.

According to the survey of 505 employed executives, including 90 in IT, 61% are not satisfied with their current jobs. Among those, 77% plan to change jobs in the next six months for reasons that include lack of challenge or personal growth (20%) and limited advancement opportunities (18%).

***Computerworld*'s Thomas Hoffman spoke with Opton about the factors that are affecting IT executives' satisfaction.**

Any insights as to why some CIOs and other IT executives aren't happy with their current jobs? There are a couple of things that exacerbate the situation for IT executives. When the tech bubble burst, 9/11 happened and the economy went into the tank – all the things that pushed us into a recession – that pushed IT executives to find solutions to help their organizations perform better. Plus, the morale issues that come out of downsizing in general and the pressures that were put on IT executives added stress to an already stressful situation.

Many CIOs now report to chief financial officers and would prefer instead to report to CEOs in order to have less of a cost onus on their IT organizations and to have a seat at the table. Does this factor into the dissatisfaction of some IT executives? I don't doubt it for a minute. All of those things are human nature. If you started out reporting to the CEO, it's a very difficult [transition to make]. It isn't going to make the person a very happy camper.

How does CIO turnover compare with that for other types of C-level executives? I don't have statistics, but anecdotally I don't perceive that much of a difference. The reasons people tend to leave [their jobs] tend to be not all that much different from one function to another. I also think that coming out of the recession, some people weren't able to make a change even if they wanted to.

Is there high turnover right now for any types of C-level executives? It's pretty steady. During the recession, finance got hit pretty hard. Now that we're coming out of the recession, there's strong demand for general managers and marketing executives to support the growth curve. **53794**

JUST-IN-TIME EMPLOYEES

IBM is trying to take the principles of its supply chain for products and apply them to how it organizes and deploys its workers and their various skills. The first issue of Harvard Business School's "Supply Chain Strategy" newsletter reports that this effort involves IBM's services business. But as Bob Moffat, the company's senior vice president of integrated supply chain, says, companies undertaking such an initiative need "a common taxonomy by which they can place all of the talents and skills of their employees into a system and categorize them." According to the Harvard newsletter, Moffat and his supply chain team are working with human resources executives at IBM to create a labor resource management system that's based on a uniform taxonomy of skills and that will let the company "more efficiently match its labor resources to customers' needs and deploy the right expertise quickly."

To that end, the company has created templates that will allow employees to log their skills in a common way. "The data can then be accessed by business units seeking expertise for a particular assignment," according to the newsletter. IBM is also trying to achieve a better balance of labor supply and demand for both the short and the long term by using the database of available skills to compare the needs of the market. Such analyses should enable IBM to address projected resource excesses or shortages by taking steps such as increasing training efforts in a particular skills area.

So far, IBM seems to be alone in the field of deploying employees in the manner of auto parts delivered to a General Motors plant. Moffat told "Supply Chain Strategy" that he has searched in vain for appropriate labor-based supply chain models that can be replicated in some way. "Our competitors do not think this way," he said.

IT Outsourcing Still Rising

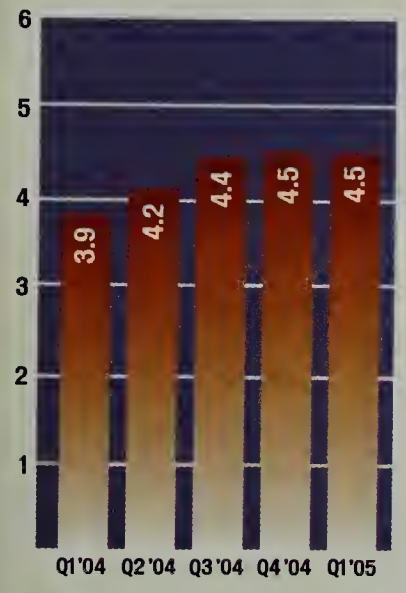
Technology Partners International Inc. reported in its quarterly index that during the first quarter of 2005, the total contract value of IT outsourcing transactions was up 68% from the same period a year earlier. The value of contracts signed in the quarter totaled approximately $10.8 billion, and TPI said that IT outsourcing transactions continue to dominate the broader market of total outsourcing deals. The total number of contracts signed in the quarter was also up 15% from a year earlier.

QUICK HITS

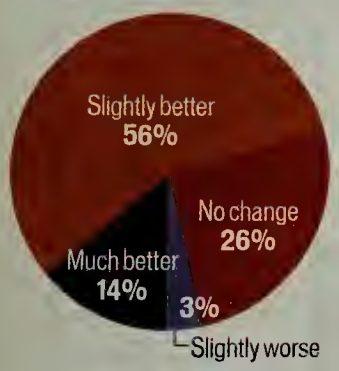
IT Checkup

Which of the following best describes the business climate for your industry?

Average CIO sentiments about the health of their industry, on a scale of 1 (very weak) to 6 (very strong):



Three business quarters from now, what do you expect for the health of your industry?



Note: Percentages don't add up to 100 because of rounding.

BASE: 221 CIOs at North American companies with at least 1,000 employees
SOURCE: Forrester Research Inc., February 2005

PAUL GLEN

To Motivate, Don't Demotivate

RECENTLY, a couple of intended compliments threw me for a loop. Two people called me in the same week and wanted me to present keynote speeches at their conferences. Of course, that was the flattering part, but what got to me was that they both referred to me as a "motivational speaker."

Since I'm a typical geek, the phrase *motivational speaker* immediately sets off alarm bells in my mind. It conjures up an image of some tall, tanned, large-toothed, smiling charisma machine expertly manipulating the emotions of a crowd, whipping up a frenzy at one moment and bringing forth tears of sadness and joy the next.

"Well, I suppose that many people find what I have to say motivating," I suggested, "but I don't try to make people cry or tell stories about overcoming cancer."

"Oh, that's fine," they both said.

Whew!

But the invitations got me thinking about all the things managers do to try to motivate their staffs: giving inspirational speeches, handing out bonuses, making up awards, inviting everyone out for drinks, hosting family picnics or sending staffers to training on cool new technology that they may never get to use.

I admire the sentiment of those active managers, trying to motivate their teams. But when I reflect on the most engaged groups I have worked with, it's not clear that managers who explicitly try to light a fire under their teams are any more successful than those who are less attentive.

PAUL GLEN is an IT management consultant in Los Angeles and the author of the award-winning book *Leading Geeks: How to Manage and Lead the People Who Deliver Technology* (Jossey-Bass Pfeiffer, 2003; *www.leadinggeeks.com*). He can be reached at **info@c2-consulting.com.**

True motivation in technical teams tends to grow organically. Individuals find their own motivation in many sources. For some, it's the opportunity for learning and advancement. For others, the broad and perhaps even global results of their work are very engaging. Some are just excited to work with the group of peers they are currently engaged with.

But the one thing that most of the managers with motivated groups do have in common is that they all avoid demotivating their teams.

Although the motivation of teams grows organically, often out of the control of managers, demotivation and dejection usually start at the top. Internally generated motivation tends to be a relatively fragile state. While a manager may not be able to create a motivated team, he often has the power to kill whatever motivation grows.

So, what sorts of things do managers do that demotivate their teams?

Excluding technicians from decision-making. Technical people's distress at being left out of major decisions is about more than just feeling out of the loop. They often sense that their talents have been disregarded. They have been insulted. And, since many decisions are influenced by technical considerations, they also feel that the decisions themselves could be suspect, since managers' technical knowledge is rarely respected. Any of these interpretations would qualify as demotivating.

Inconsistency. People who are drawn to careers in technology typically have a strong need for consistency and predictability. Early interactions with computers are quite comforting for them. As youngsters, they draw conclusions about computers, their parents and themselves. "If I type in this command, the computer always does the same thing. That's cool. I wish my mom was that predictable."

Next thing you know, they're programmers. When managers are inconsistent, at best they create distractions, and at worst they encourage their people to feel insecure. Neither result is particularly motivating.

Excessive monitoring. Among technical groups, there are few bigger insults than to call someone a micromanager. The feeling of being micromanaged is profoundly demotivating. Monitoring someone excessively, intentionally or not, communicates distrust for the person being overseen. And in many kinds of technical work, it can also serve as an impediment to progress. In intellectually demanding, creative work, interruptions can disrupt thinking for long periods of time. A manager's one-minute drop-by can result in hours of lost productivity regaining the concentration lost.

So if you want a truly motivated team, one of the best things you can do is to make sure that you're not a demotivational leader. As it turns out, not having a negative effect on your team can be a huge positive. **53768**

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Advertising Supplement

IT Careers: Info Security Continues Surge in Opportunities

This IT Careers column is personal. In a funny/not-so-funny twist, this morning's paper included a headline about identity theft. Then it sunk in that by buying a pair of shoes for my daughter, my credit card number was among 1.4 million stolen. And while IT security is a piece of this story, so too are the all-new skills IT professionals will need to transition to these new jobs.

Information security is not just about certifications and technology. It's about knowing when and where to apply them, how to *think* like someone willing to commit fraud or willing to hack. It's part corporate or government *physical* security matrixed into mile-deep knowledge of securing information.

Bob Hayes, general manager of the newly formed Chief Security Officer Executive Council and the CSO for CXO Media/IDG, says the challenges are greater than ever in terms of safeguarding people, products, property and information. "The threats, vulnerabilities and responsibilities are growing faster than resources, budgets and capabilities," Hayes says. "None of us has the bandwidth to keep recreating the wheel."

The invitation-only CSO Executive Council represents a cross section of private and public sector operations and leaders from across industry sectors and who represent the nation geographically. Initially 17 work projects have been identified by the council, including a cost-of-compliance study that indicates the cost impact in implementing post 9/11 security legislation and laws.

Hayes says there is new investment in information security, pointing to the $143 billion budget for the Department of Homeland Security. However, he predicts more convergence than new work. "There is a technology convergence, risk convergence, vendor convergence," he says. "It's full of opportunity to manage your own career – it's all a matter of how you approach it."

He points to the chief security/information officer for a major government agency. "He worked on the physical security of classified aircraft development," Hayes says. "But about 12 years ago he saw IT security emerging as an issue." He combined an academic degree in IT and systems with a background in physical security to qualify for the all-new role of CSIO.

"If I'm a firewall engineer or programmer or forensics investigator, I may also need the physical (security) skills to go outside of the company to investigate and prosecute the person. These used to be separate functions and aren't anymore," says Hayes. "We're managing the risk, investigating and prosecuting."

Hayes comments point to another trend: new niche specialties. Data forensics and specialty wireless applications are among these. "I think you will see a shift of jobs to these new areas for corporations," Hayes says. With a careful eye on costs, new work will emanate more from consulting and vendor solutions. Sample counts from career job sites point to significant hiring at companies such as Symantec and McAfee.

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Veritas

Veritas, said Britz, who is in charge of managing the vendor's NetBackup application at Deere.

During his keynote, Bloom acknowledged his company's problems with the tracking of software licenses but added that an internal team has been established to address those issues. "It's hard to articulate exact changes on the [licensing] road map here," he said. "This is not an effort that's going to stop by any means . . . after the merger."

Tom Lake, a network administrator at LandAmerica Financial Group Inc. in Richmond, Va., said that his organization has had a difficult time tracking Veritas software licenses, and he believes that it may be paying for licenses it doesn't use. Lake would like to see Veritas come up with an auditing program.

LandAmerica uses NetBackup and several new Network Appliance Inc. fabric-attached storage arrays in its three main data centers.

Bloom said it's unlikely that Veritas would perform audits on its customers, but he noted that the company is building tools to monitor license use and display the processors that its software is running on. "So when we come in to sell to them, they can realistically know how much they've used and how much they plan to use," Bloom said.

Britz and others also voiced fears that support will suffer as a result of the Symantec buyout — mostly because of what he called Symantec's reputation for poor service. Even with Veritas, "I've had 10 different sales account representatives already," Britz said. "It's a constant headache."

Service Slippage

Todd Warfield, a systems administrator at Liberty Mutual Insurance Co. in Boston, said he's similarly worried that service could suffer following the merger. "I'm just hoping Veritas keeps a lot of what they already have, especially in support," Warfield said.

Bloom tried to reassure users that service won't change following the merger, which is likely to close at the end of June. "You're still going to call the same number, and probably for 99% of the people in this room, you're still going to be talking to the same [sales and support] people you always talked to," he said.

Bloom spent much of his keynote explaining Veritas' acquisition history as well as the deal with Cupertino, Calif.-based Symantec.

"What we're trying to do, and what we continue to focus on, is delivering one set of tools from one vendor to solve this [integration] problem in a heterogeneous world," Bloom said. "One of the things that happens when you do a lot of M&A activity is people start getting the perception that 'Gee, all you're doing is buying companies and putting that technology into the marketplace.' " **54105**

NetBackup, Vault Updates On Tap

SAN FRANCISCO

Veritas Software last week released the latest version of its enterprise backup application, NetBackup, and unveiled several products it expects to release over the next 18 months.

At its annual user conference here, Veritas officials told attendees that NetBackup 6.0 adds integration with Network Appliance's NearStore disk array management interface and SnapLock archival software, creating a single management console for all three products.

Veritas also announced that it has signed a joint support agreement with Sunnyvale, Calif.-based NetApp that allows either company to be the initial point of contact for service calls.

LandAmerica Financial Group uses NetBackup and several NetApp fabric-attached storage arrays in its three main data centers. Tom Lake, a network administrator at LandAmerica, said the joint support plan could mean "huge" potential benefits for him.

Veritas also brought out a new version of Enterprise Vault, its e-mail and document management software. The new version will address personal, or .pst, files by searching for those folders on a corporate network so that an administrator can centrally consolidate and compress them.

Veritas said that along with its upcoming product releases, it's deploying a Google-like search-and-retrieval engine that will be available in Enterprise Vault 6.0, due out by July, as well as in future products. That version will be the first upgrade to Enterprise Vault since Veritas acquired it with its KVS Ltd. purchase last fall.

Mike Sherwood, CIO for the city of Oceanside, Calif., said the municipality's IT shop was an early adopter of Enterprise Vault and is beta-testing the latest version. He said he likes its ability to easily search for and retrieve e-mails and attachments with its "AltaVista-like" features.

Jeremy Burton, executive vice president of Veritas, gave an early look at two products, code-named Panther and Bighorn, that are under development. The offerings will provide continuous data protection and incremental backup for remote offices, he said. They're set to ship in 2006.

– Lucas Mearian

Veritas CEO Addresses Postmerger User Concerns

SAN FRANCISCO

At his company's user conference here last week, Veritas Software CEO **Gary Bloom** addressed concerns about the upcoming Symantec acquisition. In an interview with *Computerworld*, he also discussed software license management and new storage security products.

One issue raised by users is the difficulty of managing software licenses and tracking them. Can you be specific about how Veritas is going to clean up that situation? There are some things we've already done. One of the things was we eliminated node lock keys. These were keys associated with a specific processor, and if all the sudden you took our software and tried to run it on another processor, you needed another key.

When would a self-auditing tool come out? It's going to be a continual process over the next 12 to 24 months.

Antivirus protection on e-mail archiving: When will users see a tighter integration between Symantec and Veritas to provide such tools? Very quickly. Early in the merger's integration phase, [there] will be a package under which you can buy antivirus, antispam, compliance, e-mail management technologies. Within the first year we'll have a pretty tightly integrated product offering. When will we build antivirus scans on the archive? That might take a little longer.

Users have expressed concern about Symantec's customer service. How will the merger affect that? It won't affect it. The goal is minimal disruption for the customers. The person they call today for support on Veritas products, they're going to get the same person on the phone and the same policies and support characteristics.

What's the greatest challenge in the merger? It's not going to be competition. So if it's not competition, it's execution.

You just came out with NetBackup 6.0. Symantec has LiveState. So you do have some overlap. How will you address that? It's relatively minor overlap. They've been predominantly, at Symantec, focused on how do you recover the image of the system, and we've been primarily focused on the backup of the data. If you look at the combination of the two, it's my belief we'll be able to do something better in the industry, which is the ability to recover not only the environment . . . but then all the user information that goes on the system as well. Is there a little overlap? Of course there's a little overlap, and we'll sort it out over time.

– Lucas Mearian

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FRANK HAYES ■ FRANKLY SPEAKING

Patents Pending

DEPARTMENT OF LET'S-TRY-THIS-AGAIN: In my column last week about patents, I said the draft version of a new patent law would make all U.S. patent applications public after 18 months. That's true. But as Brigid Quinn of the U.S. Patent and Trademark Office wrote to tell me, 90% of U.S. patent applications are *already* published after 18 months. The proposed law would just eliminate a current exemption for the other 10% of applications, in which the inventor promises not to file a patent application for the same invention in a foreign country. Thanks for clearing that up, Ms. Quinn.

Ron Riley has something different he wants to clear up.

Riley is an inventor. He likes patents, and not as a way of preventing anyone from using patented technology. Riley *wants* people to use his inventions and those of other small inventors. He just wants to get paid for his work.

Is the patent system broken? Riley doesn't think so. Will the proposed law improve things? Riley ran down a long list of provisions in the new law designed to make it easier for big companies to avoid paying for technologies created by small inventors — something Riley says large vendors are notorious for doing.

Small inventors, big vendors, start-ups, standards organizations and customers all have skin in this game. But according to Riley, the proposed new patent law is full of proposals that benefit big vendors.

For example, making it easier to challenge patents sounds good — who could object to spiking bad patents? But the draft law also makes it easier for deep-pocketed vendors to strangle inventors with legitimate patents, just by outspending them in court. And limiting infringement damages means even if an inventor wins a patent infringement suit, his legal costs might not be covered.

Other provisions are just bad ideas, Riley says. For example, awarding patents to the first person to file a patent application, rather than the first to invent something, sounds like it will encourage inventors to file patent applications promptly. In reality, Riley argues, it will just encourage rushed applications for half-baked inventions and result in more bad patents.

Am I convinced? Not completely. But I'm no longer so sure that the proposed patent-reform law will be good for corporate IT shops.

Will it give us fewer obvious or frivolous patents? That seems unlikely. Hiring more patent examiners for the patent office is probably a better way to clean up that process.

Will it give us a balance between what inventors need and what patent-users want, between innovation and access to technology? Not if the draft law really is shot through with benefits for big vendors at the expense of small start-ups and individual inventors, where much real innovation comes from.

Will it give us good transparency, so we won't keep waking up surprised to discover that a key product we use, a key standard or a key piece of homegrown software depends on someone else's patent? That's not a priority of this law.

So it may be the wrong law for us *and* for small inventors, who are organizing to torpedo it. In the past, those inventors have been pretty successful at fighting patent "reform" they thought would gut their legitimate rights. They're already at work on it; at last week's Senate hearings on the proposed law, Segway inventor Dean Kamen testified that some of its provisions were unnecessary and even "have the very real potential to create substantially worse problems."

Meanwhile, we still need fewer bad patents, better balance between innovation and access to technology, and improved patent transparency. If the patent game isn't broken, it can still use some real improvements — with a deck that isn't stacked for one set of players. Stay tuned. 54071

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com.**

What the @#$%! Is This?

System operator decides to try out a new application's systemwide "message of the day" feature. "He enters an off-color, inappropriate message," says a pilot fish in the know. "He laughs at his clever wit – then realizes the application's developers have not provided any means to change the message. It takes until midmorning to get the proper application programmer to wipe the offensive message, but not before it comes up on every PC user's screen as they log in that day."

SHARK TANK

Oops!

Remote user's computer comes back from central IT's repair shop. Before, it had a problem; now it won't start up at all, user tells help desk pilot fish. "I asked him what was the computer doing, and while he was explaining it, the other phone line beeped in," says fish. "When I answered it, the technician who had worked on that computer was calling – to tell me he forgot to put the hard drive back into the computer before he sent it to the remote user."

Click, Right?

User can't get his e-mail to work, so troubleshooting pilot fish tells him to right-click on the e-mail program icon, then select Properties from the menu. "That's when we couldn't understand each other anymore," fish says. "He kept asking me where, and I kept explaining that the properties should be on the e-mail icon, and he kept insisting there was no 'e-mail' icon on his desktop." Fish finally spots the error: "He had heard 'write *click* on the e-mail icon,' " she says. "So he *didn't* have an e-mail icon – just an icon labeled Click."

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Office admin prints out a 200-page color document for a meeting with a prospective client. But plans change, the meeting is shifted to another office, and the admin needs to get the document there. "To save $15 for overnight shipping, she prints the document over a VPN connection to a remote color printer," reports a sysadmin pilot fish. "But that printer is leased – we pay 25 cents per color print. So by saving $15, she incurred $50 in printing costs."

Safety First

Newly transferred pilot fish's laptop is updated to match his new site's configuration. But when it comes back, VPN is gone, FTP disabled, e-mail attachments disallowed and all but local site Web pages disabled. What's up? he asks. "We're obligated to protect your PC," support guy tells him. But this is a laptop, fish protests, and now I can't use it on trips or work with others outside of the local site. Support guy: "See? You're protected!"

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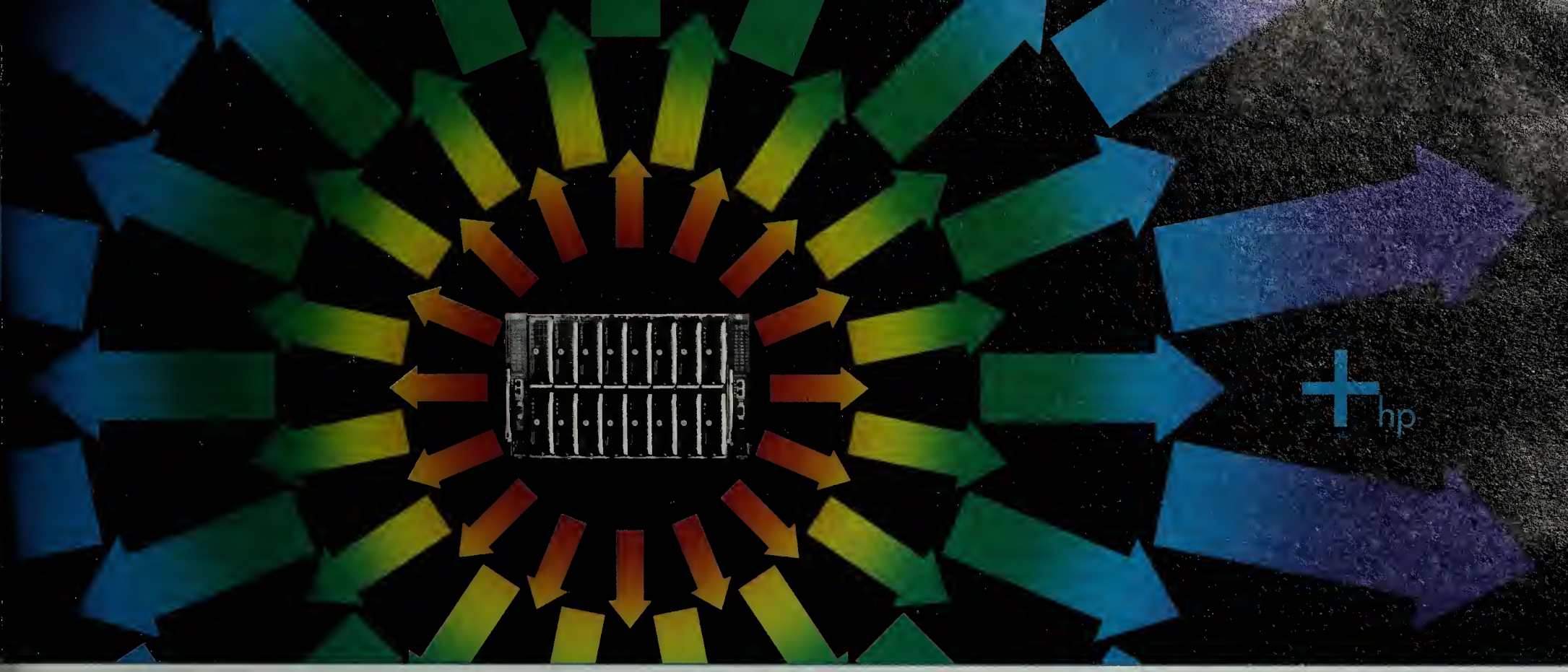

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